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Office national de l'énergie
annual report 2003
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14 March 2004

The Honourable R. John Efford, P.C., M.P.
Minister of Natural Resources
580 Booth Street, 21st Floor
Ottawa, Ontario
K1A 0E4

Dear Minister:

I am pleased to submit the Annual Report of the National Energy Board for the year ending 31 December 2003, in accordance with the provisions of Section 133 of the *National Energy Board Act*, R.S.C. 1985, c. N-7.

Yours truly,

Kenneth W. Vollman
Chairman

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Our Purpose

We promote safety, environmental protection, and economic efficiency in the Canadian public interest within the mandate set by Parliament in the regulation of pipelines, energy development and trade.

Our Vision

To be a respected leader in safety, environmental and economic regulation.

Our Goals

NEB-regulated facilities and activities are safe and perceived to be safe.

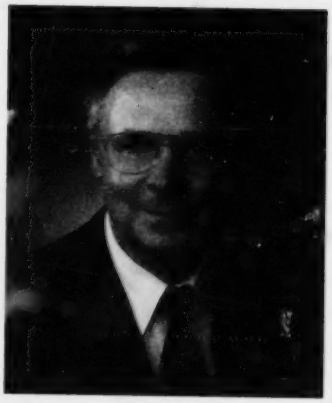
NEB-regulated facilities are built and operated in a manner that protects the environment and respects the rights of those affected.

Canadians derive the benefits of economic efficiency.

The NEB fulfills its mandate with the benefit of effective public engagement.

The NEB is effective in leading its people and managing its resources.

Chairman's Letter



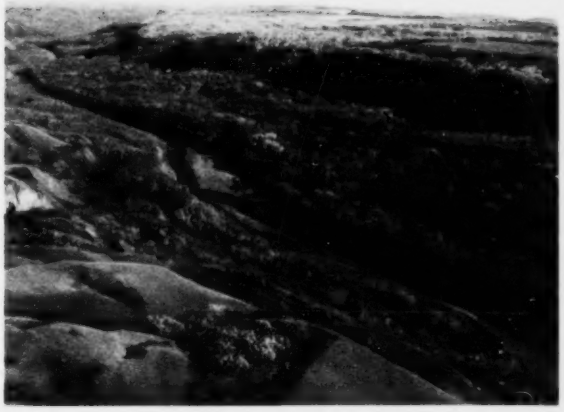
Canadians have long relied on the Western Canada Sedimentary Basin (WCSB) as their primary source of conventional crude oil and natural gas. However, conventional crude oil production from the WCSB has been declining for some time, and natural gas production has been flattening out over the last two to three years. In the face of declining conventional supply, producers are increasingly turning to the development of non-traditional sources of supply. For natural gas, this includes supplies from the North and the East Coast offshore, as well as the development of coalbed methane supply sources in the WCSB and importing liquefied natural gas (LNG). For crude oil, this means expanding production from the East Coast offshore and from Alberta's oil sands deposits. The development of non-traditional sources of supply will result in proposals for the development of new LNG facilities and for the construction of new gas and oil pipelines. The Board was active in 2003 in developing a co-operative regulatory framework for the first such application, the proposed Mackenzie Valley Pipeline.

On the electricity side, Canadian demand for electricity has been growing moderately, while generating capacity has increased more slowly. Many of the recent regulatory projects reviewed by the NEB have been geared toward increasing imports. The 14 August 2003 power outage in the U.S. and Ontario underscored the importance of a reliable electricity transmission system. The Board was a participant in the joint U.S. - Canada Power System Outage Task Force established to investigate the causes of the blackout and how to reduce the possibility of future outages.

Canadians experienced higher energy commodity prices in 2003. Prices of transportation fuels responded to high world oil prices, while volatile and higher prices in the North American natural gas market resulted from a tightening supply situation in North America, where declining domestic supply put pressure on prices at times of high demand. Electricity prices, which are still largely regulated in Canada, increased only marginally, on average.

As a result of the move to more diverse supply sources, Canadians face increasingly complex and difficult choices in the energy sector, as they confront conflicting goals, values and aspirations. This complexity of choice was demonstrated during 2003 in several hearings, that drew a large number of participants and took many months to complete. The Board was also asked to facilitate discussions or adjudicate on matters involving several billions of dollars in transportation tolls. In addition, the Board sought and participated in several opportunities to partner and coordinate with a growing number of departments and organizations at all levels of government involved in regulating the energy sector.

It is expected that the degree of complexity of choices facing Canadians, and therefore the Board's number and scope of challenges and opportunities, will continue to increase in years to come. The NEB therefore sees its role in Canada as providing a stable, clear and transparent



regulatory framework for these energy choices to be made in the public interest.

Much of what the NEB has done to respond to these complexities can be encompassed within the "smart regulation" approach introduced in the September 2002 *Speech from the Throne*. For the NEB, smart regulation is the umbrella for many of our initiatives. These include focusing on outcomes, for example through goal-oriented regulation, creating regulatory clarity, and providing information on energy markets.

The Board's path toward goal-oriented regulation began with the *Onshore Pipeline Regulations* in 1999, followed by the *Processing Plant Regulations* in 2003. Three further sets of regulations are in various stages of preparation and will be promulgated over the next few years.

Regulatory clarity was a key theme during 2003. During the year, the NEB undertook a major review of its *Guidelines for Filing Requirements 1995* (GFR). The *NEB Filing Manual*, which will replace the GFR, is expected to be published in the spring of 2004. The NEB also developed guidelines for pre-application meetings to facilitate communication between Board staff and outside parties where appropriate. Another initiative was the development of the Appropriate Dispute Resolution program. The Board believes that more effective and expanded use of appropriate dispute resolution techniques can enhance competitiveness of energy markets and deliver significant benefits in terms of certainty, preservation of relationships, confidentiality, flexibility and savings in both cost and time.

To fulfill our energy market monitoring role, the NEB informs Canadians about energy trends and issues and engages the public in discussions about Canada's energy outlook. *Canada's Energy Future: Scenarios for Supply and Demand to 2025* is the NEB's most recent long-term energy outlook and was published in July 2003. The Board also issued three energy market assessment (EMA) reports in 2003, related to electricity exports and imports, the Maritimes natural gas market and short-term natural gas deliverability from the WCSB. In April 2003, we published the first of what will become an annual performance report on the safety of the companies we regulate. *Focus on Safety - A Comparative Analysis of Pipeline Safety Performance* is aimed at providing a clear understanding of the safety performance of the NEB-regulated oil and gas pipeline industry.

I believe that the National Energy Board remains well-positioned to carry out its role in the development of Canada's energy industry, provide expertise and services, and to adapt to any future changes. I believe that the results shown in this report demonstrate our commitment to achieve our goals and fulfill our mandate, as we will continue to do in the public interest of all Canadians.

Our Role and Responsibilities

About the NEB

The National Energy Board (NEB or Board) is an independent federal agency that regulates several aspects of Canada's energy industry. The NEB was established in 1959 and reports to Parliament through the Minister of Natural Resources. The main responsibilities of the NEB are found in the *National Energy Board Act* (NEB Act) and include regulating the construction and operation of pipelines that cross international or provincial borders, international power lines and designated interprovincial power lines, and aspects of international trade in natural gas, oil and electricity.

The NEB regulates approximately 45,000 kilometres of pipelines across Canada (Figures 1 and 2). These include large diameter high-pressure natural gas pipelines, crude oil and oil products pipelines, shorter small-diameter pipelines, and one carbon dioxide pipeline. In 2003, gross export revenues from natural gas, petroleum, and electricity were nearly $62 billion[2] and Canada's energy trade surplus (the value of energy exports minus value of energy imports) was $36 billion. Annual toll revenue for major pipelines regulated by the Board under tolls and tariffs[3] was nearly $3.5 billion for gas pipelines and $838 million for oil pipelines in 2003.

Another key role is to regulate natural gas imports and exports, and oil and electricity exports. The Board has additional regulatory responsibilities under the *Canada Oil and Gas Operations Act* (COGO Act) and under certain provisions of the *Canada Petroleum Resources Act* (CPR Act) for oil and gas exploration and activities on frontier[4] lands, particularly in Canada's north and certain offshore areas (Figure 3). The Board also has specific responsibilities under the *Northern Pipeline Act* and the *Energy Administration Act*.

The NEB is a court of record and has the powers of a superior court with regard to compelling attendance at hearings, the examination of witnesses under oath, the production and inspection of documents, and the enforcement of its orders. The NEB Act provides for up to nine permanent Board Members, who are assisted by staff including financial analysts,

The NEB's corporate purpose is to promote safety, environmental protection and economic efficiency in the Canadian public interest[1] within the mandate set by Parliament in the regulation of pipelines, energy development and trade.

The NEB's vision is to be a respected leader in safety, environmental and economic regulation.

1 The public interest is inclusive of all Canadians and refers to a balance of economic, environmental, and social interests that changes as society's values and preferences evolve over time. As a regulator, the Board must estimate the overall public good a project may create and its potential negative aspects, weigh its various impacts, and make a decision.

2 Canadian currency is used unless otherwise specified.

3 The amount charged by pipeline companies for transporting energy and the conditions under which they provide service.

4 Those lands in the North and in offshore areas that are not subject to a federal/provincial shared management agreement.

FIGURE 1
Major Gas Pipelines in Canada

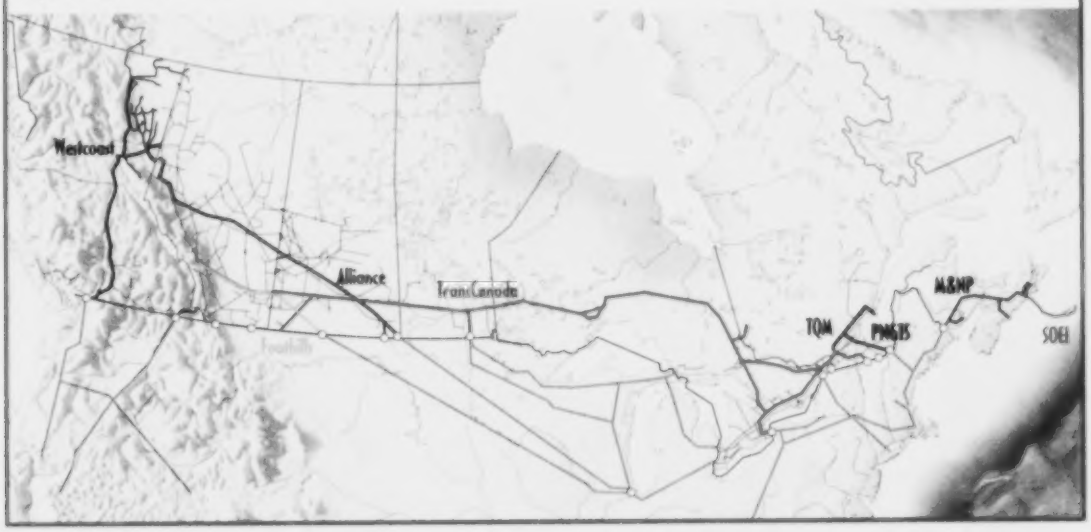
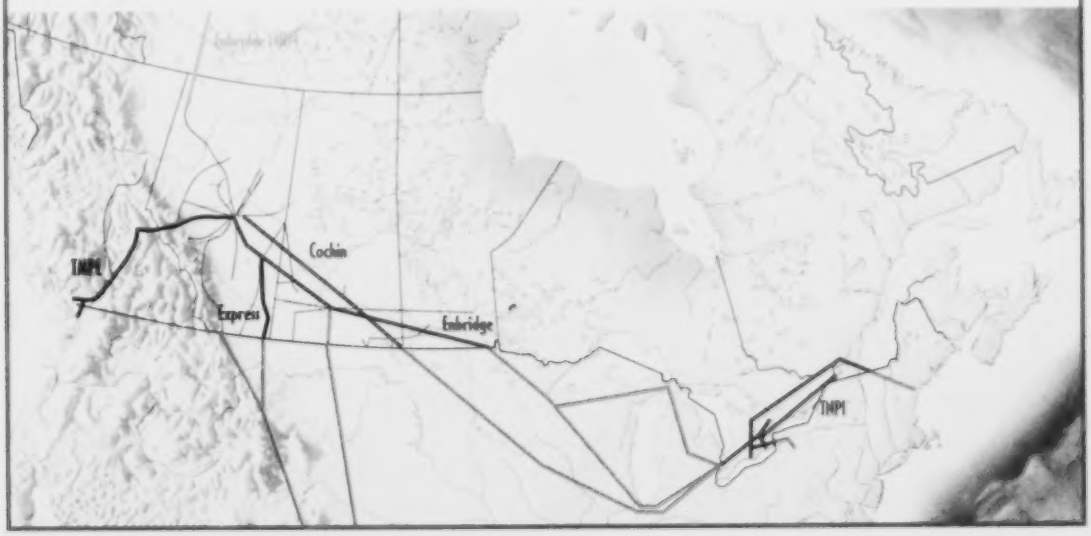


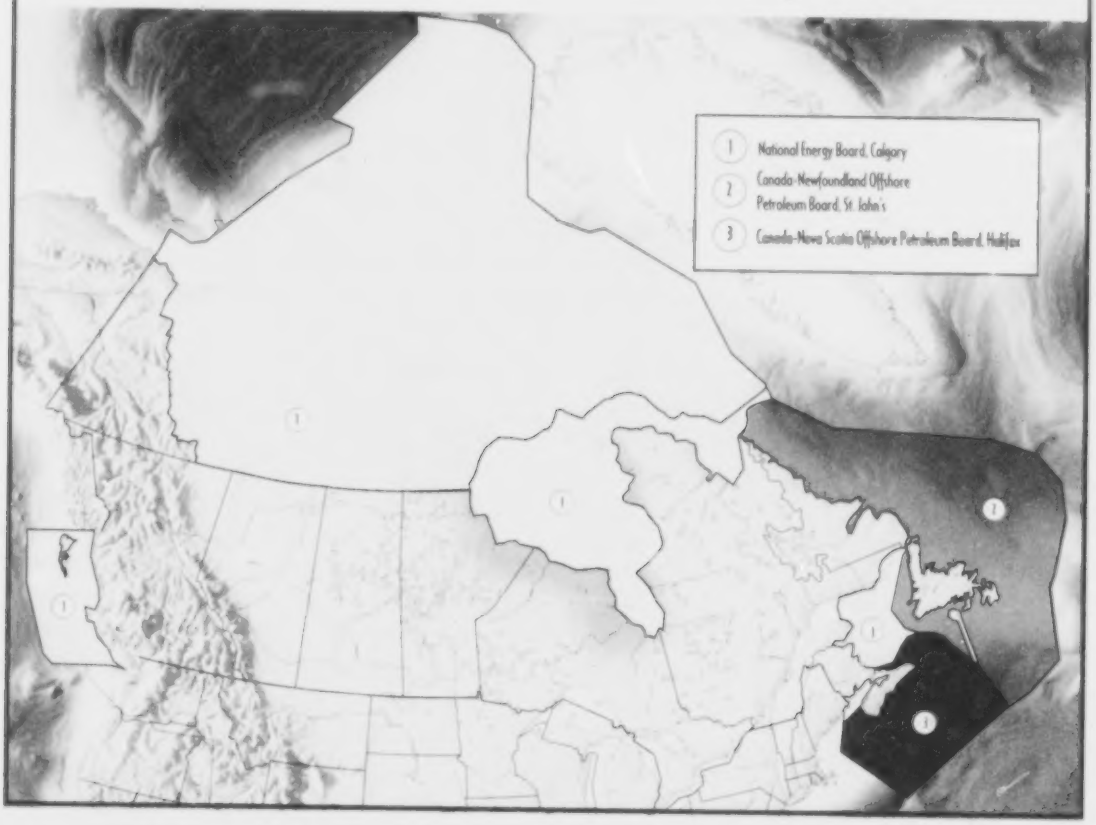
FIGURE 2
Major Oil Pipelines in Canada



environmental specialists, economists, engineers, geologists, geophysicists, and lawyers, among others. Public hearings are typically conducted by three Board Members, who constitute a quorum of the Board, with one acting as the Presiding Member. The Board's regulatory decisions and the reasons for them are issued as public documents. In making its regulatory decisions, the Board must balance all of the competing interests, while having a view as to what is in the overall public interest.

To determine whether a project should proceed, the Board considers, among other things, the project's economic, technical and financial feasibility, and its potential environmental and

FIGURE 3
Frontier Administrative Areas


1 National Energy Board, Calgary
2 Canada-Newfoundland Offshore Petroleum Board, St. John's
3 Canada-Nova Scotia Offshore Petroleum Board, Halifax

socio-economic impacts. Under the NEB Act, the NEB has a mandate for environmental protection as a component of the public interest. The NEB also has environmental responsibilities under the *Canadian Environmental Assessment Act* (CEA Act) and the *Mackenzie Valley Resources Management Act*. In addition, Board inspectors are appointed Health and Safety Officers by the Minister of Labour to administer Part II of the *Canada Labour Code* as it applies to facilities regulated by the Board.

The NEB Act requires that the Board keep under review matters relating to all aspects of energy supply, production, development and trade that fall within the jurisdiction of the federal government. The NEB may, on its own initiative, hold inquiries and conduct studies on specific energy matters as well as prepare reports for Parliament, the federal government and the general public. Upon request, the NEB provides advice to the Minister of Natural Resources and other government ministers, departments and agencies. The NEB also provides expert technical advice to the Canada-Newfoundland Offshore Petroleum Board (C-NOPB), the Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB), Natural Resources Canada (NRCan) and Indian and Northern Affairs Canada (INAC).

Additional information on the background and operations of the NEB may be found at the Board's Web site, www.neb-one.gc.ca.

Regulatory Highlights

In 2003, the NEB considered applications for new pipeline facilities, new international power lines, tolls and tariffs filings, short-term export orders and permits, and to conduct activity in frontier areas. In addition to inspections undertaken during construction, post-construction monitoring and inspections and audits of operating pipelines and facilities were conducted. The NEB also prepared reports on current and future energy market developments in Canada. These activities are summarized below:

Certificates, Orders, Permits and Applications Approved in 2003

- 766 total Certificates, Orders, Permits and Letter Approvals

Construction and Operation of Pipelines and Power Lines Under Parts III and III.1 of the NEB Act

- 5 Certificates of Public Convenience and Necessity
- 179 Orders

Pipeline Tolls and Tariffs Under Part IV or the NEB Act

- 18 Orders

Export of Natural Gas, Crude Oil and Electricity Under Part VI of the NEB Act

- 411 Orders and Permits

Letter Approvals

- 53 Letters

Exploration and Production Activity on Frontier Areas Under the COGO Act

- 100 Applications approved

Activity in Frontier Areas under the CPR Act

- 6 Significant Discovery Applications
- 3 Commercial Discovery Applications

Proceedings

- 7 public hearings
- 78 hearing days

Compliance Monitoring

- 34 inspections undertaken during construction
- 73 inspections of operating pipelines and facilities
- 7 management system audits

Appropriate Dispute Resolution Program

- 4 landowner files addressed
- 1 toll workshop

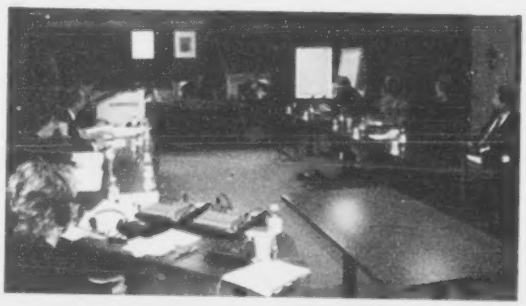
Provision of Energy Market Information

- *Canadian Electricity Exports and Imports: An Energy Market Assessment* (January 2003)
- *The Maritimes Natural Gas Market: An Overview and Assessment* (June 2003)
- *Canada's Energy Future: Scenarios for Supply and Demand to 2025* (June 2003)
- *Short-term Natural Gas Deliverability from the Western Canada Sedimentary Basin 2003-2005* (December 2003)

Developing Regulations and Guidelines

In the September 2002 *Speech from the Throne*, smart regulation was set out as a key strategy in maintaining a Canadian advantage in a globally competitive world. In keeping with this theme, the NEB continued to develop its own smart regulation strategy based upon a goal-oriented approach to regulation, coupled with clear and predictable regulatory processes and effective cooperation and partnerships with government agencies and boards.

In the goal-oriented approach to regulation, the regulations identify the outcomes that it seeks to attain, while allowing companies the flexibility to select the best methods to achieve the outcomes. The goal-oriented approach promotes increased industry responsibility, allows for flexibility and efficiency, and provides opportunities to adopt improved operational and safety techniques in a more timely manner. It places an increased emphasis on risk assessment and the use of management systems.



The NEB *Processing Plant Regulations* came into effect in January 2003. This regulation uses a goal-oriented approach and deals with the design, construction, operation and abandonment of federally-regulated gas processing plants. The NEB is using the goal-oriented approach in developing other regulations including the proposed *Damage Prevention Regulations*, the *Canada Oil and Gas Diving Regulations*, and the *Canada Oil and Gas Drilling and Production Regulations*.

In January 2003, the NEB released the revised *Guidance Notes for the Onshore Pipeline Regulations, 1999*. The revised guidance notes reflect extensive consultation with stakeholders, which began at the NEB Spring Workshop held in June 2002. In 2003, to assist development of the proposed new *Damage Prevention Regulations*, the Board undertook extensive consultations with stakeholders across Canada based on a conceptual draft of the regulation that had been released in May 2002. The draft *Guidance Notes for the National Energy Board Damage Prevention Regulations* were also released for comment in November 2003.

A key tool to encourage completeness when filing applications under the NEB Act is the new *NEB Filing Manual*, which is an updated version of the 1995 *Guidelines for Filing Requirements*. The manual outlines the information the Board requires to evaluate a project and make an informed decision. By providing applicants with clarity as to the information required by the NEB during the application process, it is expected that more complete applications will be received by the Board, thereby reducing the number of information requests and leading to increased efficiency in the application process. The *NEB Filing Manual* is expected to be published in the spring of 2004.

The NEB was also active in developing and maintaining regulations regarding exploration and development activities under the COGO Act. These regulations, developed in co-operation

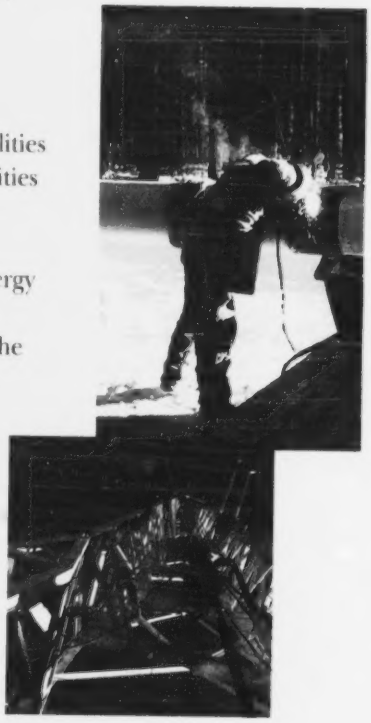
with NRCan, C-NOPB, C-NSOPB, the Nova Scotia Department of Natural Resources and the Newfoundland Department of Mines and Energy, ensure common regulatory approaches for activities in the offshore regions, the Northwest Territories and Nunavut. The NEB also provided advice to Human Resources Development Canada for the update of the *Oil and Gas Occupational Safety and Health Regulations* under the *Canada Labour Code, Part II.*

The Board continued to participate with industry, government and stakeholder groups in a number of initiatives to develop consensus-based standards, best practices and common approaches to safety and environmental issues. For example, the NEB participated in the revision of the Canadian Standards Association (CSA) standard for oil and gas pipeline systems, CSA Z662, which was released in July 2003.

Applications Highlights

In 2003, the Board considered applications for new pipeline facilities, new international power lines, tolls and tariffs filings, applications for short-term export orders for oil and gas, and export permits for electricity. Appendices B, C and E contain details of regulatory decisions issued in 2003.

In considering an application, large or small, the Board is cognizant of its public interest responsibilities. Applications for smaller pipelines, facilities expansions or power line facilities require as careful scrutiny from the Board in terms of the broader public interest as do applications for major facilities. Several 2003 applications prompted significant public participation and dealt with complex environmental and social issues. The Board takes its role in considering the unique balance of public interests equally seriously in each of these cases.



Pipeline Facilities

The Board considered several major applications for natural gas facilities in British Columbia and convened two hearings for oil pipeline facilities in 2003.

In January 2003, the Board approved an application by Westcoast Energy Inc., carrying on business as Duke Energy Gas Transmission Canada (Westcoast), to expand its Southern Mainline Transmission System. The approved facilities consist of approximately 54.6 kilometres of 1 067 mm[5] natural gas pipeline in six loop segments along the existing mainline, additional facilities at several compressor and meter stations, providing for additional capacity of approximately 5.7 $10^6 m^3/d$ to the Southern Mainline system. In April 2003, Westcoast advised the NEB that approximately 3.3 $10^6 m^3/d$ of released capacity was not recontracted on the Southern Mainline and, as a result, the company decided to postpone construction of some of the approved facilities.

In August 2003, the Board approved an application from Trans-Northern Pipelines Inc. (Trans-Northern) to increase the capacity of its petroleum products pipeline system from Montréal, Quebec to Farran's Point near Ingleside, Ontario and to reverse the direction of flow between Farran's Point and the Clarkson Junction in Mississauga, Ontario. The decision also approved priority access from Montréal to Oakville of 7.3 $10^3 m^3/d$ to Petro-Canada and 1.8 $10^3 m^3/d$ to Ultramar Ltd., as outlined in their respective priority access agreements with Trans-Northern. The project consisted of replacing four line segments totaling approximately 72.5 kilometres between Montréal and Farran's Point; upgrades to four pump stations at Montréal and Como, Quebec

5 The NEB uses the International System of Units. A metric conversion table is provided at the end of this report.

and Lancaster and Ingleside, Ontario; the construction of four storage tanks at the Farran's Point pump station; and the construction of three pump stations near Iroquois, Mallorytown and Ingleside, Ontario.

In September 2003, the Board approved an application from EnCana Ekwan Pipeline Inc. to construct and operate a sweet natural gas pipeline. The approved pipeline consists of 82.5 kilometres of 610 mm pipeline and associated facilities with a design capacity of approximately 11.8 $10^3m^3/d$. The pipeline route will begin at the EnCana Oil & Gas Partnership's Sierra Plant near Fort Nelson, British Columbia and terminate at a tie-in point on Nova Gas Transmission Ltd.'s mainline near Rainbow Lake, Alberta.

In November 2003, the Board approved an application from Trans-Northern to relocate approximately 525 metres of 406.4 mm pipeline and lower two other sections of its refined petroleum products pipeline in King's Forest Park in Hamilton, Ontario. The City of Hamilton had requested that Trans-Northern relocate and lower its pipeline in order to accommodate construction of the Red Hill Creek Expressway. The Board held a written proceeding to consider the project.

Also in November 2003, the Board approved an application submitted by Georgia Strait Crossing Pipeline Limited, on behalf of GSX Canada Limited Partnership, to construct and operate the GSX Canada Pipeline. The GSX Canada Pipeline is the Canadian portion of the Georgia Strait Crossing Project, a new international pipeline that would enable natural gas to be transported from Sumas, Washington to Vancouver Island, British Columbia. The GSX Canada Pipeline would consist of approximately 60 kilometres of 406 mm pipeline and related facilities, extending from a point on the Canada-United States border in Boundary Pass to a point south of Duncan on Vancouver Island.

The application was considered by a Joint Review Panel. The Panel was established under the CEA Act and the NEB Act to conduct a joint review of the project. The application was approved following the Government of Canada's response to the Joint Review Panel Report, which was released in July 2003. In its report, the Panel concluded that the GSX Canada Pipeline Project is not likely to result in significant adverse environmental effects provided the Panel's recommendations regarding environmental matters are implemented and appropriate mitigation identified during the course of the review is applied. The government's response also required that environmental conditions be part of any regulatory approval. Subsequently, the Panel made its decision under the NEB Act and, subject to the approval of the Governor in Council, issued a Certificate of Public Convenience and Necessity for the GSX Canada Pipeline Project, subject to the fulfillment of 33 conditions, including the need for regulatory approvals for the proposed Vancouver Island Generation Project (VIGP) facility near Nanaimo.

In February 2003, Encana Corporation requested that its application before the C-NSOPB and the NEB for the Deep Panuke Offshore Gas Development project be adjourned *sine die* and that the balance of the proceedings be suspended. In response, the NEB and the C-NSOPB agreed to suspend the coordinated public process for the review of the project. The NEB rescinded the authorization of its Member under section 15 of the NEB Act and adjourned the GH-4-2002 proceeding. Subsequently, in December 2003, Encana withdrew its application from both Boards and requested that any further consideration of its applications be discontinued.

Tolls and Tariffs Matters

One public hearing was held in 2003 to consider tolling matters. The Board also approved uncontested applications relating to toll settlements and pipeline tariffs, and conducted a number of financial audits.

In February 2003, the Board convened the RH-1-2002 proceeding. This was the first fully-contested cost-of-service tolls hearing for TransCanada PipeLines Limited's (TransCanada) Mainline since the tolls for the 1994 Test Year were established in the RH-4-93 proceeding. In the decision released in July 2003, the Board approved a 2003 Average Rate Base of $8.57 billion and a Net Revenue Requirement of approximately $1.9 billion, an increase of approximately $17 million over the 2002 level. In addition, the Board approved the establishment of a new Southwest Tolling Zone but required TransCanada to report on its use two years after implementation. The Board also approved an increase to the minimum bid floor price for Interruptible Transportation service from 80 to 110 percent of the 100 percent load factor Firm Transportation toll. The Board further approved a depreciation rate of approximately 3.42 percent for 2003, an increase over the 2002 rate which was 2.89 percent.

In July 2003, Maritimes and Northeast Pipeline Management Ltd. (M&NP) filed an uncontested toll settlement for the years 2004, 2005 and 2006. A unique feature of M&NP's settlement is the implementation of a levelized toll over the three-year period, subject to adjustments based on the disposal of the prior year's deferral account balances. Having received no comments in opposition from interested parties, the Board approved M&NP's toll settlement as filed.

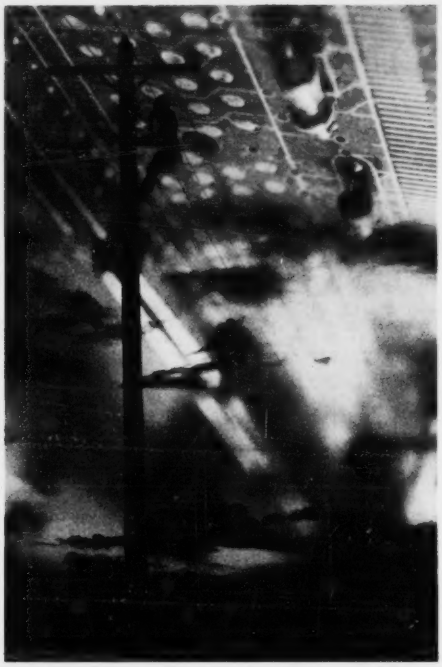
Foothills Pipe Lines Ltd. (Foothills) filed an application pursuant to Part IV of the NEB Act for approval of a Settlement Agreement entered into between Foothills and the Canadian Association of Petroleum Producers in January 2003. The agreement was with respect to certain modifications to the existing cost of service methodology for fixing Foothills' tolls and a "Special Charge" recovered by Foothills in its tolls for certain expenditures that had been incurred for the development of the northern portion of the Alaska Natural Gas Transportation System project. The Board approved the Settlement Agreement in March 2003.

Westcoast submitted an application for approval of its 2003 final tolls in July 2003. The application was opposed by three interested parties, who objected to certain aspects of the income tax determination incorporated in the tolls. In November 2003, after considering the submissions from Westcoast and the interested parties, the Board denied the objection and approved the tolls as filed. The Board also approved a new toll for Terasen Gas Inc.'s firm service on Westcoast between Kingsvale and Huntingdon, British Columbia.

Power Line Facilities

The NEB conducted two hearings for proposed international power lines (IPLs) in 2003.

New Brunswick Power Corporation (NB Power) filed an application to construct a 95.5 kilometre, 345 kilovolt IPL from the existing transmission terminal at the Point Lepreau Generating Station to a point near Woodland on the Maine-New Brunswick border. The application was originally filed in 2001 and revised in 2002. In January 2003, Board staff held



public information sessions in Rennfield and St. Stephen, New Brunswick to give interested parties an opportunity to obtain information on how to participate in the hearing process. The public hearing was held in March 2003 in Saint John, New Brunswick. The Board approved the application in May 2003.

Sumas Energy 2 Inc. (SE2) filed an application with the Board in July 1999 (revised October 2000) to construct and operate an IPL. The proposed 230 kV IPL would originate in Sumas, Washington, cross the Canadian border near Abbotsford, B.C. and extend approximately 8.5 km northward to BC Hydro's Clayburn substation. The proposed IPL would move electricity to the B.C. grid from a gas-fired generating facility to be built and operated by SE2 in Sumas, Washington. The hearing took place over 39 days from January 2001 to September 2003. About 400 intervenors participated, a record number for an NEB proceeding. In December 2003, the Board issued, pursuant to the CEA Act, its Environmental Screening Report for public examination and comments.

Activity in Frontier Regions

Exploration activity was primarily focused in the southern Northwest Territories (NWT) and the lower Mackenzie Valley and Mackenzie Delta areas. In 2003, geophysical activity decreased significantly while drilling programs continued at levels significantly higher than in the previous year. Activity in the southern NWT near the hamlet of Fort Liard and in the Central Mackenzie Valley focused on geophysical programs and exploratory drilling.

In 2003, the Board continued assessing applications for frontier projects. Activity was mostly related to the tie-in of the discovered gas reserves in the southern NWT. The oil and gas pool at Cameron Hills was brought on to initial production and tied into the Cameron Hills pipeline system that connects to pipelines serving North American markets. In addition to Cameron Hills, production operations continued from three producing gas fields near Fort Liard, the Norman Wells oil field and the Ikhil gas field, the latter supplying gas to Inuvik. Abandonment continued on the production facilities and wells at the Pointed Mountain Gas Field near Fort Liard, which produced gas from 1972 to 2001.

The NEB also received several Significant Discovery Applications and Commercial Discovery Applications for the southern and northern Northwest Territories pursuant to section 28 (or section 35) of the CPR Act. This is a result of an active exploratory drilling season by the petroleum sector operating North of 60.

In December 2003, pursuant to section 25 of the CEA Act, the NEB requested the federal Minister of the Environment to refer to a review panel an application submitted by

Geophysical Service Incorporated (GSI). GSI applied in September 2002 to gather up to 2 500 linear kilometres (km) of 2D marine seismic data in the western Gulf of St. Lawrence, principally in the area between Anticosti Island, Gaspé Peninsula and the Magdalen Islands. As part of the CEA Act assessment, the NEB sought and received extensive comments from the public and from federal authorities possessing expert or specialist information in respect of the project. The NEB determined that the project may cause significant adverse environmental effects and that public concerns warranted referral to a panel review.

Regulatory Cooperation in the North

In 2003, the boards and agencies with regulatory and environmental assessment responsibilities in the Mackenzie Valley (12 organizations in total including the NEB) began implementation of the *Cooperation Plan for the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline through the Northwest Territories* (June 2002) (Cooperation Plan). The Cooperation Plan sets out a coordinated process for review of a major pipeline application in a manner that is intended to reduce duplication, provide certainty and timeliness, and enhance public participation. A key element in the process is the establishment of the Northern Gas Project Secretariat (NGPS). The NGPS opened officially in December 2003 to assist the various parties to the Cooperation Plan.

In June 2003, Imperial Oil Resources Ventures Limited, on behalf of itself, ConocoPhilips Canada (North) Limited, Shell Canada Limited, ExxonMobil Canada Properties, and the Aboriginal Pipeline Group, submitted a Preliminary Information Package on the proposed Mackenzie Gas Project to the various boards and agencies. With this information and applications to the Mackenzie Valley Land and Water Board, the alignment of environmental assessment processes for the project began, and the initial steps toward formation of a Joint Review Panel for the project were taken. To date, no applications for pipeline construction have been filed.

The NEB also participated in the multi-stakeholder development of the Mackenzie Valley Environmental Impact Assessment Review Board's *Draft Environmental Impact Assessment Guidelines*. These guidelines were released for discussion and comment in December 2003.

Energy Overview

In order to keep Canadians informed about trends and issues in energy markets on an ongoing basis, the Board conducts extensive monitoring of market activity for all of the commodities it regulates. This overview provides a summary of Canadian energy supply, consumption, production, prices, and trade over the past five years. The Appendices, prepared as a companion document to this Annual Report, provide details on supply and disposition of crude oil, natural gas and electricity, as well as on industry activity, facility certificates, orders and licences for exports and pipeline financial information (see the List of Appendices in Supplement VI).

In 2003, Canadian energy markets were characterized by higher and more volatile commodity prices, compared with 2002. Canadian energy prices would have been even higher if not for an 18 percent appreciation in the C$/US$ exchange rate as this ratio moved from 0.65 to 0.77 over the course of the year. The year 2003 was also marked by record exploration and development activity levels, as measured by the active drilling rig count, the number of wells drilled and by prices paid for land rights.

In spite of a record number of gas wells drilled, Canadian production of natural gas remained essentially flat in 2003, reflecting the maturing state of exploration and development within the Western Canada Sedimentary Basin (WCSB). Low levels of gas storage inventories in the spring, combined with supply concerns and high oil prices, resulted in generally higher natural gas prices for the year, with gas prices averaging $6.31 per gigajoule in 2003.

The war in Iraq and the ongoing hostilities there, combined with other geopolitical problems such as political and social unrest in Venezuela and Nigeria, contributed to a high level of uncertainty in crude oil markets and resulted in higher average oil prices in 2003. The benchmark West Texas Intermediate (WTI) crude oil averaged US$31 per barrel in 2003, an increase of about US$5 compared with 2002. Domestically, Canadian crude oil markets saw the continuation of a trend whereby declining conventional oil production in the WCSB is more than offset by expanding production from the East Coast and the oil sands. In 2003, the Alberta Energy and Utilities Board's (EUB) estimates for established reserves of crude bitumen (oil sands) in Alberta were officially recognized, for the first time, by the *Oil and Gas Journal* in its annual summary of world oil reserves.

In 2003, Canadian electricity markets featured continuing efforts to restructure the industry. The extent of restructuring varied widely across the country because regulation of the electricity industry is generally a responsibility of the provinces and territories. However, power generation levels, generally down across Canada due to poor water conditions, were offset to

some extent in Ontario by the restarting of several nuclear facilities. A major event in 2003 was the 14 August power outage, which affected an area with an estimated 50 million people and 61 800 megawatts of electric load in eight U.S. states and Ontario. Parts of Ontario experienced rolling blackouts for more than a week before full power was restored.

Energy and the Canadian Economy

In 2003, the energy industry accounted for about six percent of Canada's Gross Domestic Product (GDP) and employed just under 300 000 people, representing 1.7 percent of the Canadian labour force. Energy export revenue accounted for an estimated 16 percent of all Canadian exports, up from 12 percent in 2002. This increase was largely due to higher energy commodity prices.

Economic growth in Canada slowed during 2003 due primarily to the effects of Severe Acute Respiratory Syndrome (SARS), concerns over Bovine Spongiform Encephalopathy (BSE), and a stronger Canadian dollar. Canada's real GDP increased by only 2.0 percent compared with 3.3 percent in 2002. During the 1999 to 2003 period, Canada's real GDP increased 3.5 percent per year on average.

Total Canadian energy production increased slightly less than one percent in 2003 compared with 0.5 percent in 2002 (Table 1). During the 1999 to 2003 period, total Canadian energy production increased on average 1.4 percent per year, consistent with a rising average real GDP.

Petroleum and natural gas accounted for over 75 percent of total production. While oil production saw an eight percent increase, accompanied by increased export volumes to the United States, moderate production declines were seen in most of the other energy sources. Modest hydro generation decreases, due to poor water conditions, were partially offset by increases in nuclear generation in Ontario. The nine percent decline in coal production can be attributed to a number of facility shut-downs and the industry going through restructuring and consolidation of operations early on in 2003. The contribution of the 'Renewables and Other' category increased by nearly two percent over the previous year.

TABLE 1
Domestic Energy Production by Energy Source
(petajoules)

	1999	2000	2001	2002	2003[a]
Petroleum[b]	5 430	5 672	5 712	5 831	6 418
Natural Gas	6 189	6 403	6 534	6 514	6 367
Hydroelectricity	1232	1277	1188	1249	1190
Nuclear	801	794	836	824	847
Coal	1589	1510	1533	1430	1303
Renewable and Other	627	627	588	631	650
Total	15 868	16 283	16 391	16 479	16 775

(a) Estimates.

(b) Petroleum includes crude oil and gas plant natural gas liquids (NGL's)

Source: Statistics Canada, NEB

TABLE 2
Domestic Energy Consumption[a]
(petajoules)

	1999	2000	2001	2002	2003[b]
Space Heating	1820	1934	1885	1976	1989
Transportation	2307	2280	2240	2250	2340
Other Uses[c]	3 005	3 162	3 050	3 179	3 284
Non-Energy[d]	829	790	863	894	849
Electricity Generation[e]	1780	1804	1841	1937	2030
Total	9 741	9 970	9 879	10 236	10 492

(a) Includes consumption of imported energy.

(b) Estimates.

(c) Includes energy used for space cooling and ventilation as well as a variety of uses in the industrial sector.

(d) Includes energy used for petrochemical feedstocks, anodes/cathodes, greases, lubricants, etc.

(e) Includes producer consumption and losses as well as nuclear energy conversion requirements.

Source: Statistics Canada, NEB

TABLE 3
Annual Average Fuel prices[a]

Fuel Type	1999	2000	2001	2002	2003[d]
Natural Gas ($/GJ)[a]	2.8	4.8	5.9	3.8	6.3
Regular Unleaded Gasoline (¢/litre)[b]	58.8	71.2	69.9	69.4	73.6
#1 Diesel Fuel (¢/litre)[b]	53.6	67.4	68.1	63.0	69.1
Furnace Oil (¢/litre)[b]	37.2	53.9	53.3	49.9	57.2
Electricity (¢/kWh)[c]	7.9	7.9	7.2	8.5	8.9

(a) AECO-C price, exclusive of transportation and distribution charges.

(b) Average full serve/self serve, 10 Canadian cities.

(c) Average of 11 Canadian cities, taxes excluded.

(d) Estimated.

Source: Statistics Canada, NEB, Hydro-Quebec.

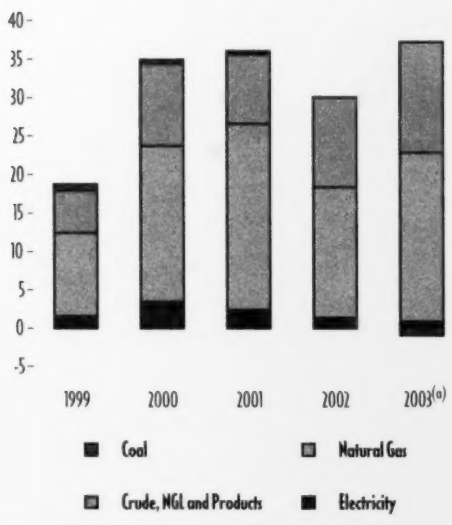
Preliminary estimates indicate that domestic energy consumption increased by approximately 2.5 percent in 2003, a greater increase than that of the Canadian economy, and occurred despite commodity price increases. However, during the 1999 to 2003 period, Canadian energy consumption increased, on average, 1.9 percent per year, compared with an average real GDP rate increase of approximately 3.5 percent per year, indicating a declining trend in the energy intensity of the economy (see Table 2).

In 2003, energy consumers faced higher energy prices (Table 3). The rise in natural gas prices caused difficulties for some users, particularly residential users and those industrial users who had little opportunity to switch to other fuels. Spot gas prices (AECO-C) rose to over $8 per gigajoule in March, at the end of the 2002-2003 heating season, and averaged $6.31 for the year, compared to $3.83 in 2002. Higher oil prices in 2003 resulted in higher retail gasoline, diesel fuel and furnace oil prices across Canada.

Electricity prices continued to be regulated in most regions. The price data indicate that Canadian residential electricity prices increased by about five percent, with increases occurring primarily in unregulated markets.

In 2003, the gross export revenues from natural gas, petroleum, electricity and coal were nearly $62 billion, about 27 percent higher than 2002 levels, mainly due to higher commodity export prices. In 2003, Canada's energy trade surplus (the value of energy exports minus value of energy imports) was $36 billion, up $6 billion from 2002 (Figure 4).

FIGURE 4
Net Energy Export Revenues
(billion $)



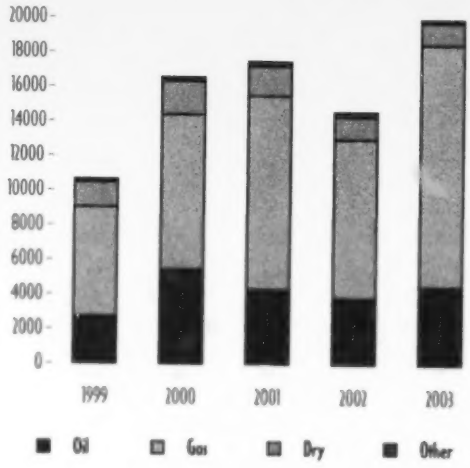
(a) Estimated.

Upstream Activity

In response to higher commodity prices and low storage levels for natural gas at the start of the year, a record 19 957 wells were drilled in 2003. This exceeded the previous high of 17 461 wells drilled in 2001, and exceeds 2002 drilling by 5 399 wells (Figure 5). Strong natural gas prices kept the drilling focus on natural gas through 2003, with gas well completions, at 14 010, making up 70 percent of all wells. Oil well drilling was 17 percent higher than in 2002, with 4 488 oil wells completed. The proportion of dry wells to total wells drilled decreased to 6.3 percent this year compared with

8.9 percent in 2002. This improvement may be due to advancements in drilling and exploration technology, as well as a greater concentration on drilling in established production areas.

FIGURE 5
Number of Wells Drilled



Competition for land rights heightened in 2003, resulting in a record year for sales of licences and leases for the right to explore for and develop oil and natural gas resources. Revenue from land sales bonuses collected by the four western Canadian provinces increased to $1.7 billion, up by 91 percent, led by record and near-record sales performances in British Columbia and Saskatchewan, respectively. Thanks in large part to a revamped oil and gas royalty system, British Columbia set a provincial record for annual sales, at $647 million, and also set a single month record for any gas and oil lease auction in Canada, netting $418 million in September. Saskatchewan recorded its second highest annual sales ever, with bonuses of $159 million. The average price per hectare in the WCSB increased to $346 versus $209 in 2002. In addition to interest in traditional areas, the Deep Basin and Foothills Regions of British Columbia and Alberta, and coalbed methane areas attracted increased attention.

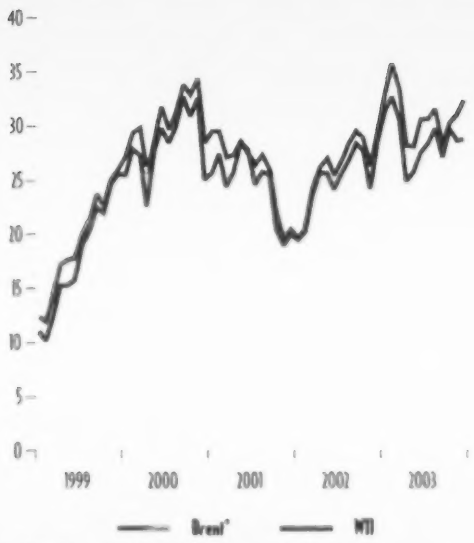
Also, under the work bid system of acquiring land rights, where the bids represent the amounts bidders have committed to spend on exploration, the province of Saskatchewan accepted work bids for $15.1 million covering 629 500 hectares, while British Columbia issued work bids covering 91 389 hectares for $14 800.

Interest in land rights acquisition in the frontier areas also increased, with most of this interest focused on the East Coast offshore area, with work bids in Newfoundland totaling $ 673 million for 2.1 million hectares, all in the Orphan Basin, while Nova Scotia accepted bids of $14.1 million for 150 thousand hectares, and Prince Edward Island accepted $3.3 million for 107 thousand hectares. In the Northwest Territories, work bids of $1.1 million, covering 80,000 hectares in the central Mackenzie Valley, were issued.

Seismic survey activity decreased in 2003, with the monthly average crew count at 21, down from 27 in 2002. This is below the five-year average level of activity, and is the second year in a row of reduced seismic surveying. Seismic activity in western Canada was focused in the northeast region of British Columbia, as well as the west and central regions of Alberta.

In Western Canada, rig activity boomed in 2003, with the monthly average drilling rig count increasing to 397, a 40 percent increase over 2002, exceeding the 2001 record year by 36 rigs per week. Higher oil and gas prices helped producers expand their drilling programs. The most active areas were northeastern British Columbia, the Alberta Foothills, southeast Alberta and southwest Saskatchewan.

FIGURE 6
WTI and Brent* Oil Price
(US$ per barrel)



* Brent is the common benchmark for European crude oil pricing.

Expenditures of $23 billion for exploration and development of Canadian conventional and frontier areas (excluding oil sands) were made in 2003, up 35 percent from 2002. Exploration spending continues to be about one-third of the total oil and gas exploration and development expenditure in Canada.

Crude Oil and Natural Gas Liquids

International Markets

World crude oil prices were strong in 2003 under the influence of rising geopolitical tensions. WTI began the year around US$32 and reached nearly US$40 by the end of February 2003. Factors influencing price included extremely tight worldwide inventori. caused by the December 2002 general strike in Venezuela, which led to severely reduced oil production in that nation at the beginning of 2003, and by anticipation that the United States would invade Iraq. With the end of the winter and the Iraq war, prices fell to about US$27. By mid-year, however, prices had recovered to approximately US$32 as Iraqi production was slow to recover due to extensive damage sustained by all facilities as a result of the war. Prices remained strong through the balance of 2003 and closed at approximately US$32.50. WTI averaged US$31 in 2003, an increase of about US$5 compared with 2002 (Figure 6).

TABLE 4
Canadian Production of Crude Oil and Natural Gas Liquids
(thousand cubic metres per day)

	1999	2000	2001	2002	2003(a)
Conventional Light (East)	17.5	23.6	24.3	45.8	55.6
Conventional Light (West)	113.1	108.3	103.9	96.5	90.9
Synthetic	51.5	50.1	54.7	68.1	80.9
Pentanes Plus	27.2	27.3	25.9	24.5	25.4
Total Light	209.3	209.3	208.8	234.9	252.8
Conventional Heavy	83.0	89.0	90.9	87.8	87.2
Bitumen	42.1	44.4	47.8	47.6	55.0
Total Heavy	125.1	133.4	138.7	135.4	142.2
Total Crude Oil and Equivalent	334.4	342.7	347.5	370.4	395.0
Natural Gas Liquids	101.2	99.8	94.2	94.7	91.7

(a) Estimates.

The Organization of Petroleum Exporting Countries (OPEC) held seven meetings in 2003 to assess the worldwide supply and demand situation and to establish its production quotas. Effective 1 January 2003, OPEC increased its quotas by 1.3 million barrels per day to 23 million barrels per day. Quotas rose again effective 1 February 2003, by 1.5 million barrels per day and by an additional 900 000 barrels per day on 1 June 2003. A quota reduction of 900 000 barrels per day to 24.5 million barrels per day was implemented on 1 November 2003. OPEC did not change output levels at its final meeting of the year on 4 December 2003, but said that it would meet on 10 February 2004 to prepare for the seasonal decline in demand beginning in the second quarter.

Production and Reserves Replacement

Canadian production of crude oil and equivalent continued the trend of establishing new records, with production estimated at an average of 395 000 cubic metres per day (m^3/d), up by nearly seven percent from 2002 levels. This growth reflects increased synthetic and bitumen production from Western Canada and an increase in conventional light crude oil production from offshore Eastern Canada (Table 4).

Production in offshore Newfoundland and Labrador was up by 24 percent in 2003, to nearly 57 000 m^3/d, reflecting the first full year of operation of the Terra Nova field and ongoing operations at Hibernia. In Western Canada, crude oil and equivalent supply increased by about 4.6 percent in 2003. Conventional light crude oil production declined by 6.2 percent, continuing a long-term trend reflecting the natural decline of the reservoirs. Conventional heavy crude oil production decreased by about one percent, down some four percent below peak production levels in 2001.

While remaining established reserves are reduced by production each year, new discoveries, extensions to existing pools and revisions to reserves estimates in existing pools usually add to reserves. From 1998 to 2002, on a cumulative basis, additions to established reserves of conventional light and heavy crude oil replaced 97 percent of production (Table 5). Declining WCSB reserves were nearly offset by reserve additions from the East Coast offshore.

The NEB's estimate of total remaining Canadian conventional crude oil and crude bitumen (oil sands) reserves at year-end 2002 (the last year for which data is available) is 28.4 billion cubic metres (179 billion barrels), which is essentially unchanged from 2001 (Table 6). This means that reserves additions

TABLE 5
Conventional Crude Oil Reserves, Additions and Production – 1998-2002
(million cubic metres)

	1998	1999	2000	2001	2002	Total
Additions[a]	68	129	78.8	35	88.1	398
Production	87	78	79.1	84	81.0	409
Total Remaining Reserves	650	702	700	680	690	
Total in Millions of Barrels	4 095	4 423	4 410	4 284	4 347	

(a) Hibernia production started in 1997. Terra Nova reserves added in 1999, and White Rose added in 2002.

TABLE 6
Estimates of Established Reserves of Crude Oil and Bitumen at 31 December 2002
(million cubic metres)

Conventional Crude Oil	Initial	Remaining
British Columbia[a,c]	122.2	22.3
Alberta[b,c]	2 603.3	260.5
Saskatchewan[c]	805.0	183.0
Manitoba[c]	37.4	2.5
Ontario[c]	14.4	1.7
NWT and Yukon:		
Arctic Island and Eastern Arctic Offshore[d]	0.5	0.0
Mainland Territories - Norman Wells	47.9	14.4
Nova Scotia[d] - Cohasset and Panuke	7.0	0.0
Newfoundland[d] - Hibernia and Terra Nova and White Rose	247.0	203.6
Total	**3 888.7**	**688.0**
Total in Millions of Barrels	**24 474.0**	**4 334.0**
Crude Bitumen		
Oil Sands - Upgraded Crude[b,e]	5 590.0	5 170.0
Oil Sands - Bitumen[b,f]	22 740.0	22 560.0
Total	**28 330.0**	**27 730.0**
Total in Millions of Barrels	**178 479.0**	**174 699.0**
Total Conventional and Bitumen	**32 214.7**	**28 418.0**
Total in Millions of Barrels	**209 953.0**	**179 033.0**

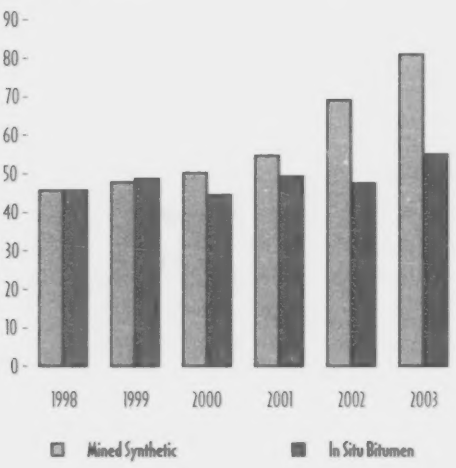
(a) British Columbia Ministry of Energy & Mines and NEB common database.
(b) Alberta Energy & Utilities Board and NEB common database.
(c) Provincial estimate for 31 December 2001, estimated by SEM to 2002.
(d) Provincial Agencies and Offshore Boards.
(e) Canadian Association of Petroleum Producers.
(f) Beat Horn abandoned 1996.
Note: Totals may not add due to rounding.

fully offset production for the year. Estimates of remaining conventional crude oil reserves in Canada increased by 1.3 percent to 688 million cubic metres (4.3 billion barrels) for 2002, as the recognition of reserves from the White Rose field, situated offshore Newfoundland, more than offset production for the year.

Oil Sands (Crude Bitumen)

There were no changes to the estimates of initial reserves of crude bitumen in 2002; thus, remaining reserves decreased by an amount equivalent to bitumen production volumes (Table 5). It is noteworthy that the estimates for established reserves of crude bitumen in Alberta were officially recognized, for the first time, by the Oil and Gas Journal in its annual summary of world oil reserves.

FIGURE 7
Oil Sands Production
(thousand cubic metres per day)



Canada's oil sands are becoming an increasingly important source of crude oil production, with 2003 production of 135 900 m^3/d (856 000 bbl/d) making up some 34 percent of total Canadian crude oil and equivalent production. Early in 2003, Shell Canada and partners Chevron Canada and Western Oil Sands celebrated the start-up of the Athabasca Oil Sands Project, Canada's third open-pit oil sands mine and upgrader operation.

In June 2003, Imperial Oil officially opened its plant and field facilities for the Mahkeses (Phases 11-13) project, a major expansion of its bitumen recovery operations at Cold Lake, adding some 4 800 m^3/d (30 250 bbl/d) of production capacity. The ongoing development of Canada's oil sands resources resulted in sizable production increases, with synthetic crude oil up by 19 percent and *in situ* bitumen up by 16 percent over 2002 (Figure 7).

Additional milestones in 2003 included the corporate sanctioning of two new steam-assisted gravity-drainage (SAGD) projects, the ConocoPhillips/TotalFinaElf-Surmont project, and the Devon Energy-Jackfish project. Suncor Energy Inc. (Suncor) also completed the first stage of its Firebag SAGD project. On a different note, the Fort Hills Energy-TrueNorth mining project was delayed indefinitely by the company, citing rising labour costs, tight financial markets and uncertain impacts of implementing the Kyoto environmental accord.

On the bitumen refining side, Petro-Canada downgraded its $5.8 billion oil sands strategy, opting for a $1.2 billion plan to retrofit its Edmonton refinery to handle only oil sands bitumen, while making an arrangement with Suncor to process bitumen from the Petro-Canada Mackay River project. Suncor purchased a Denver-based refinery, with plans for significant upgrades to process oil sands bitumen.

Crude Oil Exports and Imports

Total crude oil exports, including pentanes plus and upgraded bitumen (synthetic crude), are estimated at 246 500 m^3/d for 2003, an increase of 14 000 m^3/d over 2002. The 2003 total consisted of 37 percent light crude oil and equivalent and 63 percent blended heavy crude oil. Production problems at Syncrude Canada Ltd. and Suncor affected exports of light crude oil during several months but were offset by increased exports of heavy crude oil. The overall demand for Canadian crude oil in the United States was strong, in part due to reduced Venezuelan exports to the United States and interruptions in restoring production in Iraq.

FIGURE 8
Light and Heavy Crude Oil Export Prices
($ per cubic metre)

Prices remained relatively high throughout 2003, spiking in the first quarter with the heightened threat of a war with Iraq. The estimated value of crude oil exports in 2003 is $20.7 billion, compared with $18.9 billion in 2002. In 2003, the estimated average light and heavy crude oil export prices were $42 and $34 per barrel respectively, compared with $40 and $33 per barrel in 2002 (Figure 8). Oil price gains in $US terms were largely offset by a higher Canadian dollar.

The U.S. Midwest is the most significant market for Western Canadian crude oil. The markets in Chicago, Twin Cities and Toledo consumed 53 percent of total Canadian crude oil exports in 2003. The export market for eastern Canadian offshore production has been primarily the U.S. East Coast. Beginning in 2002, incremental volumes of Canadian East Coast production have penetrated the U.S. Gulf Coast.

On the Canadian West Coast, increased activity off Terasen Pipelines Inc.'s Westridge dock resulted in larger volumes of Canadian oil transported to California refineries. In 2003, there was also a slight increase in exports to Asia from this same facility.

In 2003, crude oil imports were 141 100 m^3/d and represented 47 percent of total refinery feedstock requirements in Canada. Crude oil requirements for the Atlantic region and Quebec were met by imports as well as increasing volumes of East Coast domestic production. Ontario refiners received about 35 percent of their feedstock requirements from foreign sources in 2003, a small increase from 34 percent in 2002.

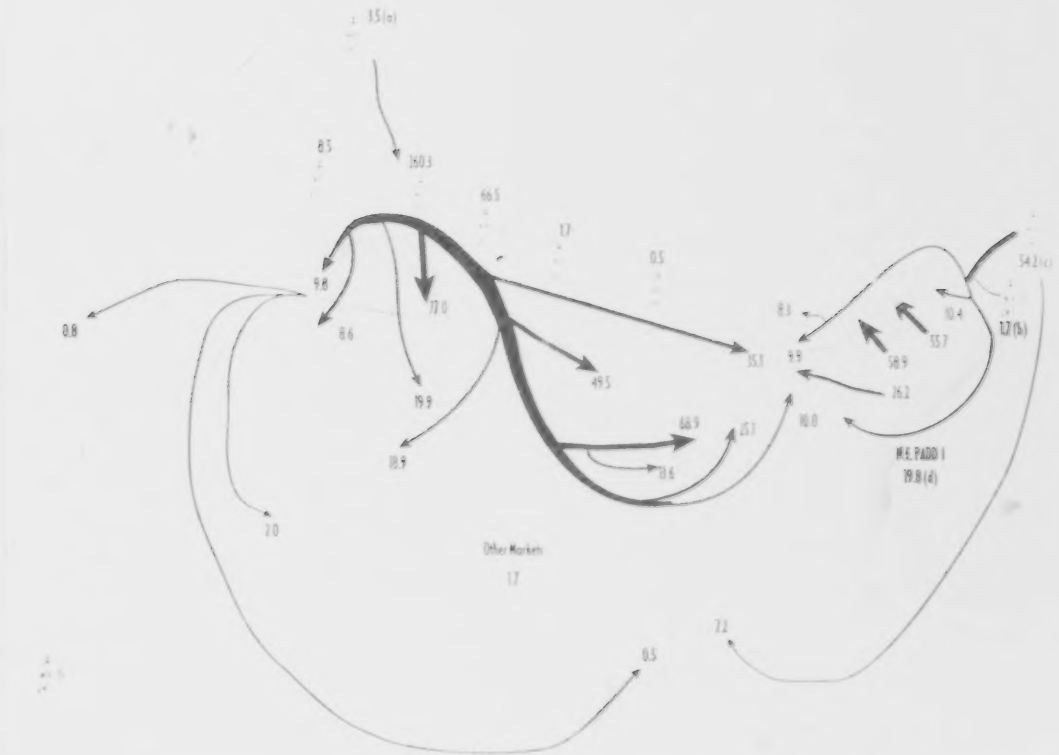
The light/heavy price differential[6] widened in 2003 to an average of about $11.55 per barrel compared with $8.75 per barrel in 2002, as a result of an abundance of heavy supply in the marketplace. Canadian heavy crude oil prices reflected the weakening Gulf Coast heavy oil

6 The price difference between Edmonton Par Light and Hardisty heavy crude oils.

prices in the first part of 2003. The differential widened further in September as a result of high inventories caused by extensive refinery maintenance and side effects of the power outage in August. A weak asphalt season in the United States further reduced the price of heavy crude oil.

In 2003, Canadian refining capacity was 329 100 m³/d, a slight increase over 2002 as a result of a small expansion in Western Canada and incremental capacity increases in the East. In 2003, the demand for petroleum products in Canada averaged 266 900 m³/d, a three per cent decrease from 2002. Refinery production rose marginally to 259 000 m³/d. Refinery receipts of domestic crude oil averaged 132 800 m³/d, an increase of six per cent from 2002. Commercial inventories of petroleum products in Canada closed the year slightly higher than in 2002.

Historically, Canada is a net exporter of main petroleum products, including motor gasoline and middle distillates. For 2003, exports of main petroleum products and partially processed oil are estimated at 50 880 m³/d, a six per cent increase from 2002. This increase in exports



prices in the first part of 2003. The differential widened further by September as a result of high inventories caused by extensive refinery maintenance and side effects of the power outage in August. A weak asphalt season in the United States further reduced the price of heavy crude oil.

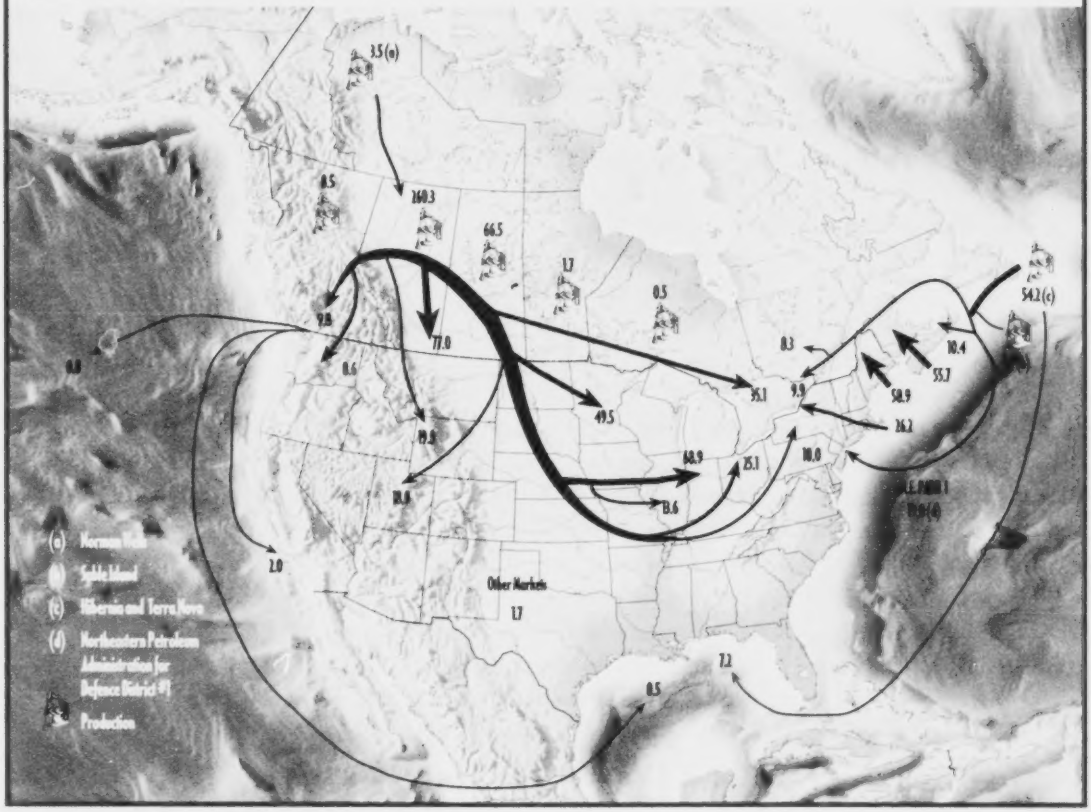
Oil Refining

In 2003, Canadian refining capacity was 326 100 m^3/d, a slight increase over 2002, as a result of a small expansion in Western Canada and incremental capacity increases in the East. In 2003, the demand for petroleum products in Canada averaged 266 900 m^3/d, a three percent decrease from 2002. Refinery production rose marginally to 319 000 m^3/d. Refinery receipts of domestic crude oil averaged 152 800 m^3/d, an increase of six percent from 2002. Commercial inventories of petroleum products in Canada closed the year slightly higher than in 2002.

Main Petroleum Products Exports and Imports

Historically, Canada is a net exporter of main petroleum products, including motor gasoline and middle distillates. For 2003, exports of main petroleum products and partially processed oil are estimated at 56 890 m^3/d, a six percent increase from 2002. This increase in exports

FIGURE 9
Crude Oil and Equivalent Supply and Disposition
(thousand cubic metres per day)



was a result of a colder and lengthier winter in the U.S. northeast and fuel switching from high priced natural gas to distillate.

The estimated revenue from main petroleum product exports, including partially processed oil, was $5.0 billion in 2003, up from $4.4 billion in 2002. The increase was a result of very high distillate and gasoline prices early in the year and very strong gasoline demand through the summer in the U.S. This revenue excludes product exports from crude oil processing agreements for which prices are not assigned. The United States continued to be the largest buyer of Canadian-produced petroleum products, accounting for approximately 95 percent of total exports. Exports were also made to Europe and small volumes to Mexico. The U.S. east coast continued to be the largest market, followed by the Midwest and the U.S. West Coast.

Imports of main petroleum products in 2003 are estimated at 25 370 m^3/d, a less than one percent decrease from 2002.

Natural Gas Liquids (excluding Pentanes Plus)

Natural gas liquids (NGL) is the collective term for the ethane, propane and butanes that are recovered from natural gas processing. Propane and butanes are also produced from crude oil refining processes. In 2003, it is estimated that approximately 81 percent of propane and 61 percent of butane supplies in Canada were sourced from natural gas production.

NGL production economics are defined by the relationship between natural gas, crude oil and liquids prices. Historically, crude oil tends to trade above natural gas prices on a heat content basis. Although throughout most of 2003 natural gas prices traded above parity to crude oil, crude oil prices remained relatively high due to several extraordinary international events and supply concerns. The NGL market reacted to the higher natural gas prices with increased liquids prices, which generally improved extraction margins and helped to maintain liquids production levels. For example, high Sarnia propane prices throughout most of 2003 appear to have provided Canadian producers with sufficient incentive to extract propane from the natural gas stream.

FIGURE 10
Alberta Natural Gas Prices - AECO "C"
($ per gigajoule)

Production of NGLs from gas plants and refineries decreased from 94 682 m^3/d in 2002 to 90 700 m^3/d in 2003, a decrease of four percent, mainly due to a slight decline in natural gas production and some loss of production related to periods of poor extraction margins. In 2003, ethane production was 38 300 m^3/d, propane production was 29 500 cubic m^3/d and the production of butanes was 22 900 m^3/d. Propane and ethane production dropped by approximately four and five percent respectively from 2002; butane production declined three percent.

For 2003, estimated total NGL export volumes are 28 900 m^3/d of which 22 900 m^3/d are propane and 6 000 m^3/d are butane. Propane and butane exports fell by 11 and 10 percent respectively, from 2002 levels. The decline in propane exports can be attributed mainly to increased Eastern Canadian demand to replenish inventories and lower Cochin Pipe Line Ltd.'s (Cochin) shipments due to flow restrictions on that line since July 2003. The decline in butane exports reflects increased use for domestic gasoline blending and heavy oil diluent, leaving less volume available for exports. Ethane continues to experience a tight supply and demand balance, with no volumes available for export.

The U.S. Midwest continues to be Canada's largest market for propane and butanes, accounting for 60 percent of the total export volume. Smaller amounts were delivered to the U.S. East Coast and U.S. West Coast. Although export volumes decreased in 2003, the estimated value of NGL exports is $2.5 billion, up 30 percent from 2002.

Natural Gas

Natural Gas Markets

Alberta spot gas prices were on the upswing at the beginning of 2003, rising to $8 per gigajoule at the end of the 2002-2003 heating season as storage inventories reached very low levels. Gas prices remained at over $5 per gigajoule despite record storage injections through to the start of the 2003-2004 heating season. Expectations that North American gas production would continue to decline moderately, combined with robust crude oil prices, contributed to the strength of gas prices. Higher natural gas prices in 2003 spurred gas well drilling activity in Canada to record levels.

Natural Gas Demand

Canadian natural gas demand increased in 2003 by 2.7 percent, to 201 million m^3/d. This increase in domestic gas consumption can be attributed to very cold weather at the end of the 2002-2003 heating season and to the expanding Canadian economy. Most provinces witnessed higher gas consumption in 2003. However, lower gas production from offshore Nova Scotia and competition from fuel oil contributed to lower gas demand in Nova Scotia.

TABLE 7
Estimates of Established Reserves of Marketable Natural Gas at 31 December 2002
(billion cubic metres)

	Initial	Remaining
British Columbia[a]	690.2	254.9
Alberta[b]	4385	1171.4
Saskatchewan[c]	221.2	77.0
Ontario[d]	44.6	11.5
NWT and Yukon	26.8	13.0
Nova Scotia - Offshore[c]	85.0	71.3
Total	5381.3	1599.1
Total in Trillion Cubic Feet	190.0	56.4

(a) British Columbia Ministry of Energy & Mines and NEB common database.
(b) Alberta Energy & Utilities Board and NEB common database.
(c) Provincial estimate for 31 December 2002.
(d) Canadian Association of Petroleum Producers.

Production

Despite record gas well drilling in 2003, production decreased by approximately three percent. Canadian marketable natural gas production in 2003 totaled 476 million m^3/d (16.8 Bcf/d), a decrease from 490 million m^3/d (17.3 Bcf/d) in 2002. This production decline is primarily attributed to the reduced drilling levels in 2002, when only 9 161 gas wells were drilled compared with an average 11 450 wells drilled over the last three years. Lower initial productivity of new wells is also a factor.

In 2003, Alberta accounted for 78 percent of total Canadian natural gas production, British Columbia 14 percent, Saskatchewan four percent, and Nova Scotia three percent.

TABLE 8
Natural Gas Reserves, Additions and Production
(billion cubic metres)

	1998	1999	2000	2001	2002	Total
Additions[a]	119	152	153	176	169	769
Production[b]	165	170	176	179	179	869
Total Remaining Reserves	1651	1629	1622	1612	1599	
Total in Trillion Cubic Feet	58.3	57.5	57.3	56.9	56.4	

(a) East Coast reserves added in 1997, production started in late 1999.
(b) CAPP.

Reserves

The NEB's estimate of remaining marketable gas reserves at the end of 2002 (the last year for which data is available) is 1 599 billion cubic metres (56.4 Tcf) (Table 7). Strong exploration activity in 2002 contributed to a reserves replacement of about 96 percent of gas production in 2002. Over the last five years, cumulative additions of marketable gas reserves replaced 89 percent of total gas production (Table 8). On a regional basis, only British Columbia saw an increase in its reserves from 2001 to 2002. Reserves in that province rose to 255 billion cubic metres (9.0 Tcf) from 252 billion cubic metres (8.9 Tcf).

Natural Gas Exports and Imports

In 2003, net export volumes were 88.0 billion cubic metres (3.11 Tcf), a decrease of 11.5 percent from 2002. Total gross exports for 2003, at 98.9 billion cubic metres (3.49 Tcf), were down 7.6 percent from the previous year because of lower production and higher demand in Canada, and a decrease of natural gas demand in the United States. The gas demand in the U.S. decreased primarily in the industrial and electric power sectors as a result of high prices and sharply lower weather-related demand following the first quarter. Imports of natural gas increased to 10.9 billion cubic metres (0.39 Tcf) compared with 7.7 billion cubic metres(0.27 Tcf) in 2002, corresponding to the overall increase in domestic demand for 2003.

Net exports accounted for 52 percent of total Canadian production in 2003, reduced from 55.5 percent in 2002 (Figure 11). The distribution of exports in 2003 was 47 percent to the Midwest and Mountain regions, 22 percent to the Northeast, 26 percent to California and the Pacific Northwest, and 5 percent to other export points. About 84 percent of these exports flowed under short-term orders; the remainder of exports flowed under long-term licenses.

The revenue from Canadian natural gas exports increased 41 percent, from $18.3 billion in 2002 to $25.6 billion in 2003, despite a 7.6 percent reduction in export volume. This reflects a 51 percent increase in the average export price to $6.75 per gigajoule in 2003, compared to $4.47 per gigajoule in 2002.

FIGURE 11
Canadian Natural Gas Production and Net Exports
(billion cubic metres)

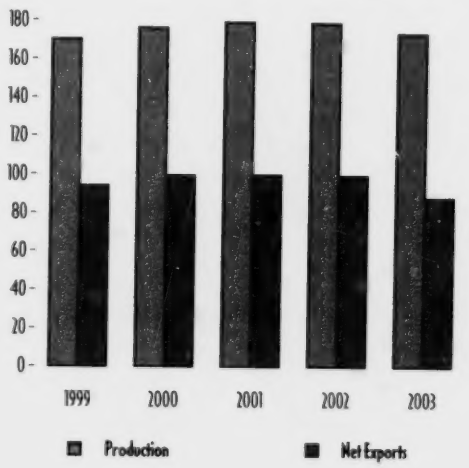


FIGURE 12
Natural Gas Supply and Disposition
(billion cubic metres)

ELECTRICITY

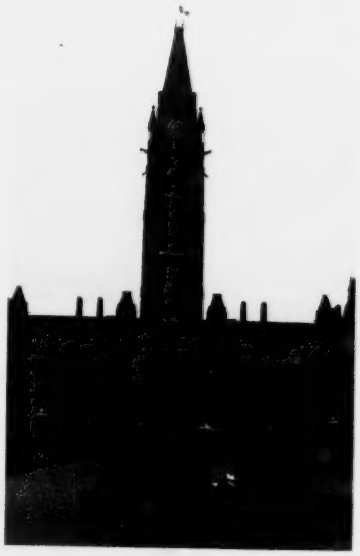
Market and Restructuring Developments

Over the last decade, many North American electricity markets have been restructured. In a traditional market structure, one utility provides generation, transmission and distribution of electricity in a franchise area, and has only limited access to other markets. Consumers pay regulator-approved prices based on the costs of providing those services. The intention of restructuring is to separate these three functions and introduce competition to the generation sector. Wholesale access to transmission grids enables distribution companies or other large buyers to use the transmission grid to purchase electricity from the most competitive generation sources. Retail access gives consumers a choice among suppliers because marketers are able to use distribution systems to sell electricity to end-use consumers. Prices in the restructured environment are negotiated between buyers and sellers.

Canadian Developments

The extent of restructuring in Canada varies across the country because regulation of the electricity industry is generally the responsibility of the provinces and territories. Only Alberta and Ontario offer wholesale and retail access, although competition is somewhat limited. British

Columbia, Saskatchewan, Manitoba, and Québec all offer wholesale access to transmission. New Brunswick has introduced a new *Electricity Act* which will allow wholesale access on 1 April 2004. In October 2003, Nova Scotia's Electricity Marketplace Governance Committee released its final report recommending introduction of limited competition in the province's electricity marketplace with the wholesale market expected to open in 2005.



In New Brunswick, the new *Electricity Act* provides the legal framework for that province to reform its electricity market and reorganize NB Power as it has planned to do for several years. In accordance with the Act, NB Power would become the NB Power Holding Corporation with four subsidiaries (distribution and customer service, generation, nuclear, and transmission). The NB Electric Finance Corporation would be created to manage and retire the Province's share of debt, and an independent system operator would manage the market rules and the electricity transmission system. New Brunswick is introducing wholesale access only and has no plans to open the retail market to competition.

The Ontario market opened to wholesale and retail competition in May 2002 with little or no immediate impact on consumers. However, as the summer progressed, growing supply deficiencies in regional markets at times exposed Ontario consumers to volatile electricity prices. In November 2002, the provincial government capped the retail price of electricity for many consumers[7] at 4.3 cents per kilowatt hour retroactive to the date the market opened. This price cap was planned to be in effect until 2006. However in November 2003, the new government introduced proposed legislation, the *Ontario Energy Board Amendment Act*, 2003, which outlines an interim pricing plan. Under this plan, effective 1 April 2004, consumers would pay 4.7 cents per kilowatt hour for the first 750 kilowatt hours consumed in a month, and 5.5 cents per kilowatt hour for consumption above that level. These rates would stay in effect until the Ontario Energy Board develops new mechanisms for setting prices. Under the proposed legislation, it is expected that electricity prices would more accurately reflect the cost of electricity and provide incentives for conservation, while continuing to protect consumers from price volatility.

U.S. Developments

Electricity providers in Canada and the United States rely on an integrated system to deliver electricity to their customers. Although Canada has historically been a net exporter of electricity to the United States, with surpluses primarily coming from hydro-rich provinces, electricity can flow in either direction across the border as required to meet load demands. Due to this degree of interdependence, it is important to consider the implications of developments in the United States, where federal initiatives are promoting further integration of the two country's systems.

7 The price cap applies to residential consumers, small commercial consumers and other designated consumers (e.g., schools, post-secondary institutions, hospitals, nursing homes, charities).

During 2003, the two major initiatives pertaining to the regulation of electricity markets in the United States were the Federal Energy Regulatory Commission's (FERC) White Paper on the Wholesale Power Market Platform and the inclusion of mandatory reliability standards in proposed federal energy legislation.

The White Paper was the FERC's response to submissions it had received on its Standard Market Design, Notice of Proposed Rulemaking, July 2002 (SMD NOPR), which was intended to facilitate the development of regional transmission organizations (RTOs). The intent of the White Paper was to address the wide ranging feedback on the complex and lengthy initiative, including regional concerns around such matters as the method of managing transmission congestion, RTO governance and protection of the transmission rights of existing customers. In a related development, a draft provision in the electricity title of the energy bill proposed to the U.S. Congress, H.R. 6, directs the FERC not to take steps to implement Standard Market Design until 2007.

The electricity title of H.R. 6 also contains a provision for mandatory reliability standards, which would effectively replace, in the United States, the voluntary system of standards development and compliance currently overseen by the industry-based North American Electric Reliability Council (NERC). The mandatory standards would be developed and enforced by an Electric Reliability Organization, with regulatory oversight by the FERC. H.R. 6 urges the President to negotiate international agreements with Canada and Mexico toward adopting this mandatory approach. As of year-end 2003, H.R. 6 had not received Congressional approval.

North American Developments

On 14 August 2003, a major electrical power outage affected parts of the United States and Canada. According to the U.S.- Canada Power System Outage Task Force,[8] the outage affected an area with an estimated 50 million people and 61 800 megawatts of electric load in eight states and Ontario. Power was not restored for two days in some parts of the United States and parts of Ontario experienced rolling blackouts for more than a week before full power was restored.

The Chairman of the NEB was a member of the joint U.S.- Canada Power System Outage Task Force, which investigated the outage to determine its causes and why it was not contained. Key factors identified in the Task Force's Interim Report were a lack of training, a lack of communication with other regions, and improper maintenance plans. The Task Force's work will continue as it develops recommendations to reduce the possibility of future outages and minimize the scope of any that occur.

Electricity Production

Hydro-generation accounts for about 60 percent of total Canadian generation (on average), but poor water conditions in many parts of Canada reduced hydro generation to about 58 percent of total generation this year. In Ontario some laid-up nuclear units were returned to service in the latter part of the year. OPG's 515 MW Pickering A Unit 4 returned to the grid on 25 September

8 Interim Report: causes of the August 14th Blackout in the United States and Canada, November 2003.

2003. Bruce A Unit 4 ramped up to 700 MW in November, and the twin Unit 3 was back in service by the end of the year and in the process of connecting to the grid. Therefore, nuclear production was higher this year and will likely increase next year as more units are returned to service. Thermal production sources showed a gain of approximately two percent compared to the previous year and a one percent increase, from 28 percent to 29 percent, in terms of its share of total Canadian generation (on average). This rise in share was due to an increase in utility conventional steam generation, which is, by far, the largest source of thermal production in Canada and accounted for about 81 percent of total thermal generation (on average). Fossil fuels are the main feedstock for this type of generation (Table 9).

TABLE 9
Electricity Production[a]
(terawatt hours)

	1999	2000	2001	2002	2003[b]
Hydroelectric	341.7	353.3	328.2	345.9	332.2
Nuclear	69.3	68.7	72.4	71.3	75.4
Thermal	147.1	161.4	164.8	160.2	163.2
Total	558.1	583.4	565.4	577.3	570.8

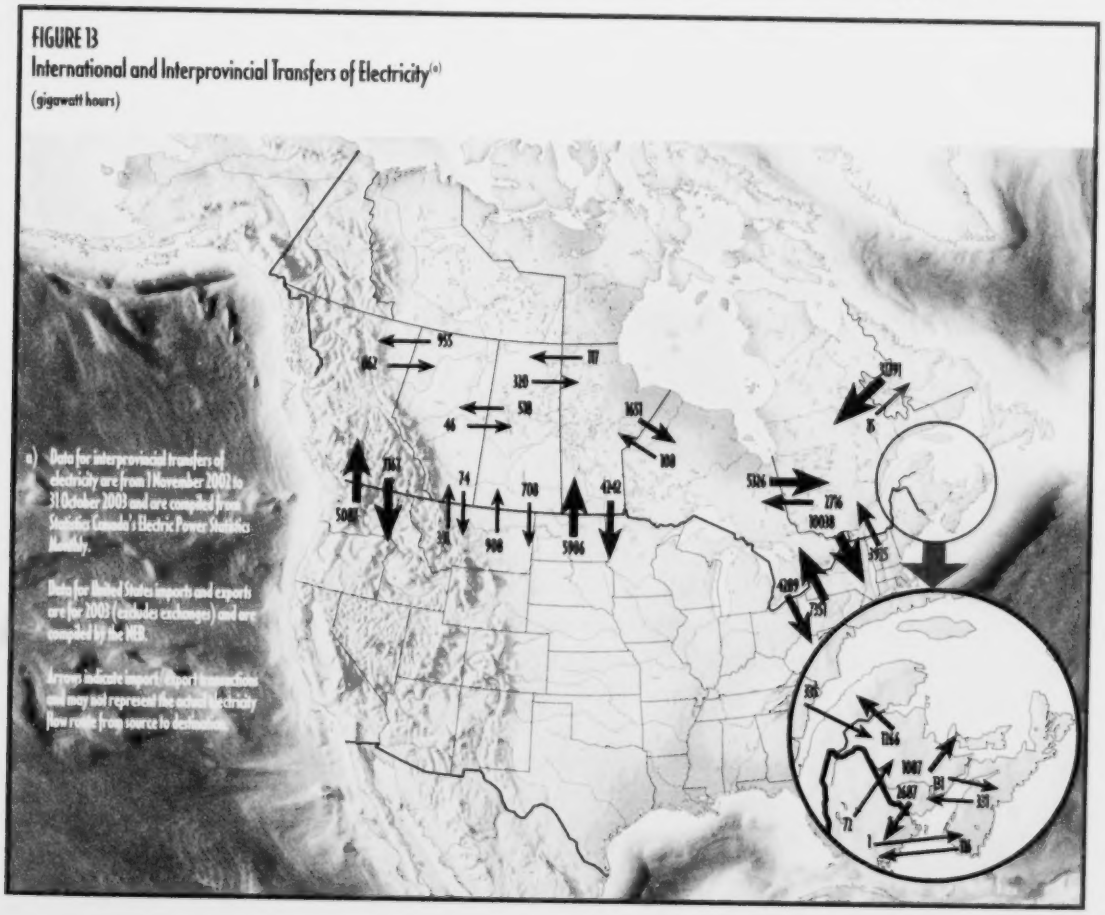
(a) Source: Statistics Canada *Energy Statistics Handbook*.
Table 8.2 Utility Generation of Electricity in Canada plus Table 8.3 Industry Generation of Electricity in Canada.

(b) Estimates.

Exports and Imports

Canadian demand for electricity has been growing moderately while generating capacity has increased more slowly. As a result, domestic demand is catching up with domestic supply. This

FIGURE 13
International and Interprovincial Transfers of Electricity[a]
(gigawatt hours)



a) Data for interprovincial transfers of electricity are from 1 November 2002 to 31 October 2003 and are compiled from Statistics Canada's Electric Power Statistics Monthly.

Data for United States imports and exports are for 2003 (calendar exchanges) and are compiled by the NEB.

Arrows indicate import / export transactions and may not represent the actual electricity flow routes from source to destination.

has reduced the amount of surplus power available for export and increased the need to import power. In 2003, water conditions were poor throughout much of Canada which decreased the availability of surplus hydro-electric generation. These combined factors resulted in a 20 percent decline in exports, from 36.5 to 29.3 terawatt hours, and a 55 percent increase, from 15.2 to 23.6 terawatt hours, in imports. Manitoba, historically a net exporter, was a net importer of electricity in 2003. Overall, net exports were 73 percent lower in 2003 than in 2002. Canada's net exports totaled nearly 6 terawatt hours, which was the lowest level of annual net exports since 1975.

Many of the recent regulatory projects reviewed by the NEB have been geared toward increasing imports. The approved NB Power Corporation's proposed line would increase import capability to 400 megawatts from 0 and increase export capability by 300 megawatts (see *Applications Highlights* section).

Alternative and Renewable Energy

Alternative and renewable energy refers to the use of alternative fuels or fuelling methods in vehicles, such as ethanol and methanol in gasoline blends, fuel cells, and hybrid electric vehicles; and also refers to renewable energy sources such as wind, solar, small-hydro, biomass and micor-turbines. Wind, biomass in the form of wood waste, and small-hydro currently account for most of this energy source category. In 2003, alternative and renewable energy production increased by about 2 percent over 2002 and accounted for nearly four percent of total energy consumption in Canada.

In 2003, the installation of wind power facilities increased capacity by 81 240 kW, or 35 percent, to a total of 316 270 kW for this type of generation. The vast majority (75 240 kW) was installed by Vision Quest Windelectric and Enmax at McBride Lake in Alberta.

In its 2003 budget, the federal government allocated $2 billion over five years to support the Government's climate change strategy, announced in November 2002. This strategy includes achieving a 25 percent improvement in new vehicle fuel efficiency by 2010; an increase in the use of ethanol in the gasoline supply; development of fuelling technologies and infrastructure for commercialisation of fuel cell vehicles; urban transportation initiatives; and negotiation of voluntary agreements to improve fuel efficiency of goods transportation.

In an action that may hasten the development of fuel-cell based vehicles, in January 2003, U.S. President George W. Bush announced the FreedomCar and Fuel Initiative. In this announcement the government proposed a total of U.S. $1.7 billion over the next five years to develop hydrogen powered fuel cell vehicles, hydrogen infrastructure and advanced automotive

technologies. Although fuel cell technology for vehicles will not be available to the consumer for some time, hybrid electric vehicles are commercially available. The interest in these vehicles has been limited. In Canada, between 2001 and 2003, less than 200 hybrid electric vehicles were sold. It is expected that over time they will gain greater consumer acceptance.

There are a variety of programs in place to promote energy efficiency at the end-use level and to promote the development and use of alternative and renewable fuels. Natural Resources Canada's Office of Energy Efficiency, in its *Directory of Energy Efficiency and Alternative Energy Programs in Canada,* provides an inventory of programs offered by the federal government, provincial, territorial and municipal governments, and by major utilities and companies across Canada. This directory can be accessed at www.oee.nrcan.gc.ca/neud/dpa.

Safety

A primary aspect of the NEB's purpose is to promote safety of the facilities and activities that it regulates. This is reflected in the first of the NEB's five corporate goals.

The safety risks associated with facilities and activities regulated by the NEB are managed through competent design, construction, operation and maintenance practices. As the designer, builder and operator of a facility, a company has the primary responsibility for safety. However, the NEB plays a significant role in safety by ensuring that a regulatory framework that encourages companies to maintain or improve their safety performance is in place and is linked to public expectations. The Board ensures that safety risks associated with construction and operation of regulated facilities are identified and managed by pipeline companies. The Board does this by:

Goal 1: NEB - regulated facilities are safe and perceived to be safe.

- developing regulations and guidelines for the safety and protection of the public and property;
- assessing proposed facility applications from a safety perspective;
- ensuring that appropriate mitigative measures and conditions are in place before granting approval;
- monitoring construction and operations by conducting inspections and audits to verify that regulatory requirements, as well as other codes and standards identified through the application process, have been and will continue to be met;
- investigating failures or incidents that occur, with the intent of preventing similar incidents;
- issuing safety advisories; and
- conducting inquiries into safety issues.

Monitoring Compliance

Inspections

The NEB monitors the pipelines and facilities it regulates from construction through to abandonment. NEB inspection officers verify compliance with:

- commitments set out in the application and made during a proceeding;
- conditions of the project approval;

- requirements set out in the *Onshore Pipeline Regulations, 1999* (OPR-99) and other relevant regulations, standards and codes; and
- construction safety manuals, emergency response plans and other relevant documents.

NEB inspection officers also conduct safety inspections of operating pipeline facilities, such as pump or compressor stations and processing plants. These safety inspections are conducted to determine compliance with NEB regulations and the *Canada Labour Code, Part II*. Inspections are also conducted along existing pipeline systems to assess whether third party excavation work is being completed in compliance with the NEB *Pipeline Crossing Regulations*. On frontier lands, the NEB conducts inspections related to geophysical and drilling programs and production operations to verify compliance with the approved program and relevant regulations. Occupational safety and health matters are also addressed during these inspections. The NEB has not issued regulations regarding the construction of international power lines and regulates their construction and operation by attaching conditions to approvals.

The NEB supports a cooperative approach to compliance, working with companies to ensure that safety commitments and requirements are met. The NEB promotes safety training for company and contractor construction personnel to ensure that crews understand project safety requirements and the NEB's responsibility to monitor compliance. Non-compliance situations are handled in the first instance by obtaining an immediate and voluntary correction by the company. If the situation cannot be corrected immediately or if additional information is required from the company, NEB inspection officers may ask for a written assurance of voluntary compliance (AVC). In 2003, the NEB issued 56 AVCs related to safety. NEB inspection officers can also issue a field order when it is believed a situation could compromise safety and that corrections must occur immediately. Field orders can result in suspension of work or require special measures to be undertaken. No field orders were issued in 2003.

The NEB tracks the extent to which companies comply with the conditions on facility approvals and the effectiveness of those conditions in meeting safety requirements. The NEB uses this information to improve the clarity and effectiveness of conditions that it places on its approvals. The Environment and Safety Information Management System (ESIMS) is a tool used by Board staff to track and monitor conditions placed on approvals and mitigative measures for effectiveness and to report on the achievement of desired end results. Information from inspections and audits is entered into ESIMS, providing NEB staff access to relevant information and the ability to analyze trends and performance.

Management System Audits

Similar to inspection activities, the Board conducts management system audits on NEB-regulated facilities to evaluate compliance with the OPR-99. Through interviews with company staff, document review, and on-site verification, auditors evaluate programs and processes that operating facilities have in place to meet the intent of goals within the OPR-99.

During 2003, the Board continued with implementation and development of its safety audit program. The Board's audit of a company's safety program verifies that the company has in

place the following components: safety policy, planning and procedures, and training, as well as implementation of these program elements. The company's approach to evaluating its safety performance and taking necessary corrective action is also included, along with the company's approach to performing a management review of its overall safety program.

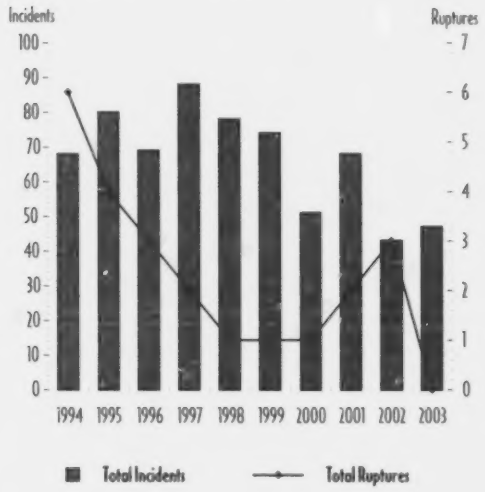
In 2003, seven management system audits were conducted by the NEB. In general, the companies that were audited were found to have taken proactive steps in developing the elements of a safety program. The audits did identify some deficiencies in the implementation of certain safety program elements in some of the audited companies. Plans to correct those deficiencies were subsequently submitted to the Board. The NEB also followed up on audits conducted in previous years by reviewing the corrective actions taken by companies. The purpose of the follow-up was to determine if the action taken was adequate and if compliance to OPR-99 requirements had been achieved, thus completing the audit cycle.

Incident Investigation

Reportable incidents include those events that may cause:

- death or serious injury to a person;
- a significant adverse effect on the environment;
- an unintended fire or explosion;
- the unintended or uncontained release of low vapour pressure hydrocarbons in excess of 1 500 litres;
- the unintended or uncontrolled release of gas or high vapour pressure hydrocarbons; or
- the operation of a pipeline beyond its design limits as determined under CSA Z662, CSA Z276 or any operating limits imposed by the Board.

FIGURE 14
Pipeline Incidents and Ruptures 1994 to 2003

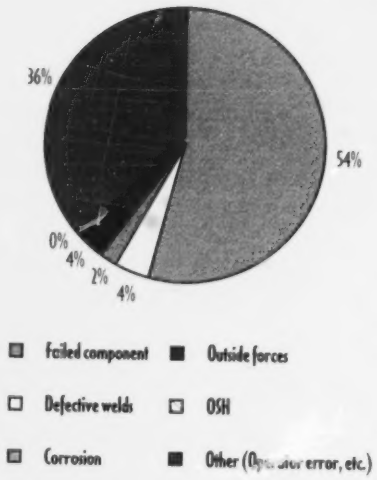


Forty-six incidents were reported to the NEB in 2003, compared with 43 in 2002, and 68 in 2001 (Figure 14). In general, when comparing the number of reported incidents in 2002 and 2003 with those of previous years, there appears to be an improvement in the safety performance of companies with NEB-regulated facilities.

Responsibility for investigating a reportable incident rests with the Transportation Safety Board of Canada (TSB) and the NEB. Since the TSB was formed in 1990, it has had exclusive jurisdiction to investigate an incident for the purpose of defining its cause(s) and contributing factors. Therefore, the NEB investigation

works alongside that of the TSB. The NEB, in co-operation with the TSB, investigates all reportable incidents to determine cause, whether any trends are evident, and what action is necessary to prevent similar occurrences in the future. Even minor incidents can indicate the condition of a pipeline or a required improvement in safety programs. The NEB also evaluates the potential effectiveness of corrective actions plans proposed or undertaken by the company to prevent a reoccurrence of a similar type of incident. Figure 15 represents causes of reported incidents that occurred in 2003.

FIGURE 15
Causes of Incidents in 2003



The NEB has a target of zero ruptures on the pipelines it regulates. In 2003, there were no ruptures on NEB-regulated facilities and no injuries resulting from pipeline incidents. However, during 2003, the NEB continued to investigate the causes of the three ruptures that occurred in 2002. In two of the three cases, the investigation was conducted alongside the TSB. In the case of a rupture on Westcoast's sour gas pipeline that occurred on 15 May 2002, the TSB chose not to investigate the incident. The NEB did, however, investigate the incident during the course of the year, with a report expected early in 2004. Details of ruptures that have occurred on NEB-regulated pipelines, dating back to 1992, are available on the NEB's Web site at www.neb-one.gc.ca.

In 2003, total hazardous occurrences in frontier areas, as defined by the *Oil and Gas Occupational Safety and Health Regulations* under the *Canada Labour Code Part II*, remained at 45, the same level as in 2002. Equipment damage was down from eight in 2002 to zero in 2003. A reduction in disabling injuries, from 13 in 2002 to only three minor injuries in 2003, translated into an overall decrease in frequency of disabling injuries from 2.79 per million hours worked in 2002 to 2.00 per million hours worked in 2003. In addition, a gas flowline was punctured during road construction in a frontier area in December 2003. The resulting gas release did not ignite and there were no injuries or damage to property. The NEB is currently investigating the incident under the *Canada Oil and Gas Operations Act* and under the *Canada Labour Code Part II*.

The NEB's primary role during an emergency situation is to monitor the company's response, ensuring that all reasonable actions are undertaken to protect employees, public safety and the environment. As part of its monitoring role, the NEB verifies that all regulated companies have adequate emergency response plans that mitigate any negative effects resulting from oil spills or natural gas leaks. Emergency response plans and manuals are examined during audit to ensure that appropriate procedures are in place. The NEB also encourages and participates in tabletop and full-scale emergency response exercises sponsored by pipeline companies. In 2003, NEB emergency response specialists participated in six tabletop exercises and two full-scale exercises.

Security

The NEB is of the view that implementing and maintaining appropriate security measures and emergency response programs provides the necessary assurance of public safety and the security of production facilities in the deliverability of Canada's oil and gas. To ensure that appropriate security measures are implemented by companies, the NEB includes an examination of security of companies' operations and pipeline systems as part of its audit program. In general, the results of audits conducted in 2003 show that regulated companies were vigilant in maintaining a high level of security within their pipeline operations.

During 2003, the NEB continued to assist and maintain working relationships with provincial regulators and agencies, federal agencies, U.S. counterparts and pipeline associations in managing security issues which may impact the energy infrastructure. These organizations included: the Office of Critical Infrastructure Protection and Emergency Preparedness (OCIPEP), the EUB, the Royal Canadian Mounted Police, the TSB, the Canadian Association of Petroleum Producers (CAPP), the Canadian Energy Pipeline Association (CEPA), and the U.S. Office of Pipeline Safety.

Perception of Safety

The NEB continued work on its *Safety Performance Indicators* (SPI) initiative during 2003. The primary objective of the SPI initiative is to evaluate the effectiveness of safety programs among companies regulated by the NEB. The SPI results will be produced on a calendar year basis and will permit bench-marking, trend analysis over time, and allow the NEB to compare Canadian companies with international companies. By identifying areas that show declining performance and, correspondingly, areas where performance is improving, programs can be adjusted to provide the most efficient allocation of safety resources.

The first SPI report, *Focus on Safety - A Comparative Analysis of Pipeline Safety Performance,* was published in April 2003. This report compared benchmark safety data, including fatalities, ruptures, injury frequencies, liquid hydrocarbon releases, gas releases, and damage prevention, between companies with facilities regulated by the NEB and companies regulated by other boards, such as the EUB and FERC. The report is aimed at providing the reader with a clear understanding of the safety performance of the NEB-regulated oil and gas pipeline industry. The report is based upon data received through incident reporting under the OPR-99 and additional data received as part of the SPI initiative. An update to the *Focus on Safety* report is expected in early 2004.

In 2003, the NEB also began posting information on ruptures that have occurred on federally-regulated oil and gas pipelines on its Web site. The information lists reportable rupture events in reverse chronological order dating back to 1992 and includes details of the rupture such as: name of the pipeline and the company who operates it; the date of the incident; nearest population centre; the commodity being transported by the pipeline; the immediate cause and the sub-cause of the incident, etc. It also includes a link to the final TSB report, where available. This information provides a solid basis for assessing the safety of NEB-regulated facilities.

In past years, the NEB has developed a number of Safety Advisories. The Advisories were often developed as a result of the NEB's investigation into pipeline incidents and contain important information related to safety matters. As well, the TSB has developed Safety Advisories that have been received by the NEB. These Advisories are now being placed on the NEB's Web site in the Safety & Environment section for public viewing. The latest Advisory was published on 3 December 2003 regarding several incidents attributed to vibration fatigues failure of piping within compressor stations and pump stations.

As part of its monitoring program, the NEB also tracks landowner complaints.[9] In 2003, the Board received six landowner complaints related to safety concerns regarding NEB-regulated facilities and activities and company compliance with commitments, filings, conditions and regulatory requirements. Five of these complaints were resolved during the year. To assist landowners and the public, the Board released *Pipeline Regulation in Canada: A Guide for Landowners and the Public*. This publication uses the lifecycle of a pipeline to explain, step by step, the Board's role and the landowner's role in the Board's decision making process.

Research and Development

The Board continued to be active in committee work in support of the 2003 edition of the CSA Z662 Standard on Oil and Gas Pipelines. In addition, the NEB supported the development of pipeline regulations through involvement in steering committees of NRCan's Program of Energy Research and Development.

9 The Board has tracked landowner complaints since April 1999. By definition, a landowner is any person, group or company who has an interest in or who is directly or indirectly affected by the activities of a federally-regulated facility during the construction and operation of that facility.

Environmental Protection

Goal 2: *NEB - regulated facilities are built and operated in a manner that protects the environment and respects individuals' rights.*

The NEB ensures that environmental risks associated with the construction and operation of regulated facilities are identified and managed by pipeline companies. The NEB achieves this goal by:

- taking a life cycle approach to its analysis and assessments;
- conducting environmental assessments of proposed projects;
- ensuring that appropriate mitigative measures, approval conditions, and environmental protection plans are in place before granting project approval;
- inspecting and monitoring construction and operation of approved projects to verify compliance with, and assess the effectiveness of, mitigative measures, conditions, and environmental protection plans;
- auditing pipeline companies' environmental protection programs;
- investigating spills and releases with the intent of preventing similar incidents; and
- providing regulatory oversight with respect to environmental issues during the abandonment phase.

When making its decisions, the Board takes into consideration relevant environmental concerns such as: air, land and water pollution; disturbance of renewable and non-renewable resources; species at risk and the integrity of natural habitats; the disruption of land and resource use; and the protection of the rights of those affected by companies' activities in relation to pipelines.

Environmental Assessment

Conducting environmental assessments is challenging, as the regulatory framework is complex and dynamic. While most NEB-regulated activities fall under the NEB Act, upstream oil and gas activities in non-accord frontier areas are governed by the COGO Act. In addition to meeting environmental and regulatory requirements under these Acts, most projects considered by the NEB must undergo an environmental assessment under the federal *Canadian Environmental Assessment Act* (CEA Act) or, in the Mackenzie Valley, Northwest Territories south of Inuvik, under Part 5 of the *Mackenzie Valley Resource Management Act*. On 30 October 2003, *Bill C-9, An Act to Amend the Canadian Environmental Assessment Act* came into force. This new legislation followed a

mandatory five-year review of the original CEA Act. The NEB is currently developing corporate initiatives related to implementation of Bill C-9 and those provisions that will affect NEB regulatory processes. Other legislation, such as the *Species at Risk Act* (SARA), which came into force in 2003, as well as court decisions are taken into consideration when appropriate.

In 2003, several initiatives were undertaken by the NEB to communicate its information requirements and expectations regarding environmental matters and to improve consistency of environmental assessments. These included the imminent publication of the *NEB Filing Manual*, the Canadian Energy Pipelines Association (CEPA) *Education Series* seminars, the introduction of an *Environmental Screening Report Template*, and a risk assessment approach for environmental assessment.

The *NEB Filing Manual* will replace the *Guidelines for Filing Requirements 1995*. It outlines the information the NEB requires to evaluate projects and make informed decisions. Interested parties, including industry, aboriginal groups, various members of the public, and federal departments, were consulted extensively during the 2003 preparation of this document.

The NEB held *Education Series* seminars with CEPA in June and October of 2003. Their purpose was to enhance industry understanding of NEB application requirements, which should lead to more complete applications. Environmental matters were included in these discussions.

The Board also undertook the development and implementation of an *Environmental Screening Report Template* in 2003. The template was designed to provide consistency in the format and approach to environmental screening reports prepared under the CEA Act. The NEB carried out the first environmental screening of a large project using the new template on the proposed EnCana Ekwan project, an 83 kilometre natural gas pipeline located in northeastern British Columbia and northwestern Alberta. The template will be subject to ongoing evaluation, which may result in further refinements to the tool.

Most environmental assessments at the NEB confirm or incrementally improve environmental design aspects of small energy infrastructure projects that are otherwise clearly in the public interest. Certain simple, routine energy projects, identified in various provisions of the CEA Act *Exclusion List Regulations* and the NEB's *Streamlining Order*, require only rudimentary environmental assessment. In effect, these regulatory "filters" formally implement a risk-management approach, helping to focus environmental assessment attention and resources on larger or more complex projects with potential for significant environmental effects. In dealing with projects not excluded or streamlined, the Board uses a structured risk-management approach to maintain the regulatory focus on important environmental design issues.

In the fall of 2003, the Board embarked on an initiative to provide other federal departments and agencies with a better understanding of the NEB and its processes when the CEA Act is triggered. The goal was to conduct better environmental assessments by improving working relationships and facilitate coordination and effective federal authority involvement in NEB processes. Through this initiative, the Board also received feedback from federal departments on their experiences in working with the NEB. The Board will use the results of this initiative to identify improvements and implement changes to its environmental assessment processes.

Following the approval of the GH-2-2002 Grizzly Extension Pipeline Project, separate "review and learn" sessions were convened with the federal agencies that had been involved (in Vancouver) and with the applicant (in Calgary). At the meetings, participants discussed shortcomings of the project review process and made recommendations for improvement of future processes. Most discussions focused on the need for more effective and timelier communication amongst the various participants in the comprehensive study process. The use of technical conferences was identified as a possible solution to most of the concerns raised. Recent changes to the CEA Act and modified internal processes at the NEB should help bring about improvements in the areas identified.

Monitoring Compliance

In addition to monitoring regulated facilities from a safety perspective, the NEB conducts inspections and audits in the context of environmental protection from the construction phase through to abandonment.

Inspections

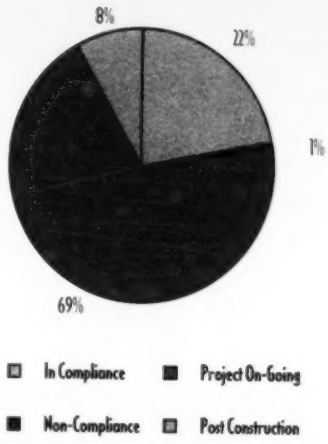
As with safety, the NEB supports a cooperative approach to compliance monitoring, working with pipeline companies to ensure environmental protection. NEB inspection officers monitor construction to verify compliance with the conditions of the project approval and the commitments set out in the company's environmental protection plan and its application. NEB inspection officers also conduct post-construction monitoring of operating facilities to evaluate the success of reclamation and other mitigative measures and to verify that the environment, the public and property are protected. The NEB also conducts environmental inspections related to geophysical and drilling programs and production operations in frontier lands to verify compliance with the approved program and relevant regulations. In 2003, NEB inspection officers received 19 AVCs related to environmental protection.

The NEB tracks environmental conditions placed on approvals and mitigative measures for compliance, their effectiveness in contributing to the goal of environmental protection, and the achievement of desired end results (Figures 16 and 17). For projects approved in 2003, where information is available through inspections or post-construction monitoring reports,

94.4 percent of environmental conditions were found to be effective in achieving their desired outcomes. Two conditions, or 5.6 percent, did not achieve their desired end results due to a lack of clarity in the written condition in one case, and non-compliance in the other.

The NEB is committed to improving the clarity of its environmental conditions to eliminate the possibility of misinterpretation of the desired end result by companies. The NEB will continue to monitor condition compliance for those projects that are not yet complete and for which information is not yet available, or where the post-construction monitoring reports have not yet been filed, to ensure that all required conditions will be fulfilled.

FIGURE 16
Status of Environmental Conditions - 1 January 2003 to 31 December 2003



Management System Audits

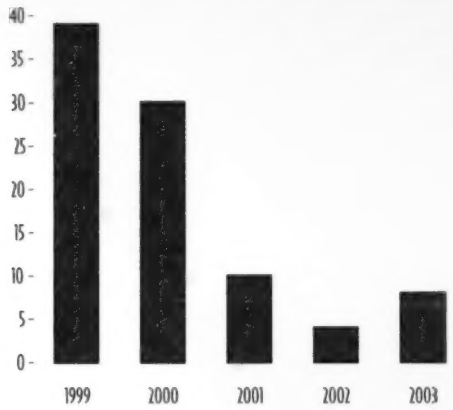
In 2003, seven management system audits were conducted, of which five included an evaluation of company environmental protection programs. Generally, the companies audited were found to have a strong commitment towards environmental protection with an environmental policy in place and supporting environmental programs. Deficiencies were noted with regard to the development of formal processes for the identification and evaluation of environmental aspects, the delivery of appropriate environmental training programs, and the implementation of company internal audit programs. NEB auditors and inspection officers also followed up on corrective actions completed in response to previous audits and evaluated whether the corrective actions taken were adequate, thus completing the audit cycle.

FIGURE 17
Achievement of Desired End Results - 1 January 2003 to 31 December 2003

Spills and Releases

Spills and releases are of concern to the Board. Depending on the nature of the product that is released, spills and releases can result in environmental damage. Twenty-six gaseous and liquid hydrocarbon spills were reported in 2003. This is down from 33 spills and releases reported in 2002, and 46 in 2001. There were 12 reportable spills of liquid hydrocarbons greater than 1 500 litres in 2003. All spills were contained within compressor station sites, pump station sites, gas plants, or terminals. There were no incidents that resulted in liquid product migrating off company property. In frontier areas, reportable spills were up from 24 in 2002 to 42 in 2003 due to increased levels of exploration and production activities. The NEB's investigation process for hydrocarbon spills includes follow-up to verify that site remediation is carried out as required by the NEB and prescribed in the company's remediation plan.

FIGURE 18
Resolved Landowner Complaints Regarding Environmental Protection and Rights of Those Affected by NEB-Regulated Facilities and Activities



Protecting the Rights of Those Affected

As a tribunal that is charged with making decisions in the Canadian public interest, the NEB is committed to protecting the rights of those affected by proposed and existing energy facilities falling within its jurisdiction. As one of its measures to meet this commitment, the NEB ensures that affected stakeholders are engaged with industry through Early Public Notification and ongoing consultation. For approved facilities, the NEB audits companies to ensure they are conducting effective emergency response, public awareness and continuing education programs at the local level.

As with safety, the Board also tracks landowner complaints related to environmental issues. In 2003, the Board received 27 landowner complaints. Ten of these related to concerns regarding the protection of the environment, the rights of those affected by NEB-regulated facilities and activities, and compliance with commitments, filings, conditions and regulatory requirements. Of these ten, eight were resolved in 2003.

In October 2003, the Government of Canada announced its plans to develop a process for Crown consultation activities where Aboriginal or treaty rights may be affected by NEB-regulated projects. The Government stated that it would request input from interested parties on the design of the process and, once the design was complete, the process would be implemented on NEB-regulated projects as a two year pilot project. The NEB will continue to support this initiative with a view to developing a workable framework for Aboriginal consultation within the context of the Board's mandate.

Research and Development

The Environmental Studies Research Funds (ESRF) provides funding for environmental and social projects pertaining to decision-making in regard to petroleum exploration, development and production activities on frontier lands. The NEB chairs and provides technical and financial resources for the ESRF Management Board, which consists of industry, government and members of the public. In 2003, the Management Board approved ten new studies, continued to provide funding to others that were previously approved, and participated in updating the CSA Standard for Offshore Structures. ESRF reports can be ordered through the ESRF Web site at www.esrfunds.org.

Economic Efficiency

The Board's third corporate goal is to promote the benefits of economic efficiency in the energy sector. The Board has an impact on economic efficiency in three ways:

- the decisions it renders;
- the energy market information it provides to Canadians; and
- the efficiency and effectiveness of its regulatory processes.

Several surveys conducted in 2003 provided external feedback indicating a desire for more leadership by the Board on regulatory and market analysis issues. As a result, the Board focused on expanding the level of consultation with stakeholders in striving to meet its Goal 3 objectives.

Goal 3: *Canadians derive the benefits of economic efficiency.*

Regulatory Decisions

Through its regulatory decisions on applications for new or modified pipeline facilities and for tolls and tariffs, the Board strives to promote an efficient natural gas and oil pipeline infrastructure that meets the requirements of shippers at reasonable tolls, while providing an opportunity for pipeline companies to earn a fair return on capital invested. The Board also ensures that exports of natural gas, oil, natural gas liquids (NGLs) and electricity do not occur to the detriment of Canadian energy users by satisfying itself that Canadians have access to domestically-produced energy on terms and conditions that are at least as favourable as those available to export buyers. A summary of Board Decisions rendered in 2003 is provided in the *Applications Highlights* section.

Energy Market Information

The Board has an important role in providing independent information and analysis on energy markets to Canadians. In 2003, the Board conducted a third-party survey of its role in providing energy market information. The feedback indicated that the Board's information and analyses are highly valued for their accuracy, quality and their independent objective viewpoint. Canadians who are making investments that will determine their future fuel use patterns have said that they value the Board's market assessments as an important input to their planning.

Energy Market Reports

The Board periodically produces specific reports, or *Energy Markets Assessments* (EMAs), as part of its regulatory mandate to monitor the supply of energy in Canada and the demand for Canadian energy in domestic and export markets. In 2003, the Board issued three EMA reports.

The first report, *Canadian Electricity Exports and Imports: An Energy Market Assessment*, examined recent trends in electricity exports and imports, associated revenue and pricing, and implications of this trade from a provincial standpoint. It found that international trade with the U.S. provides important advantages to both Canadians and Americans in terms of optimizing the use of their systems and providing enhanced reliability.

The second report, *The Maritimes Natural Gas Market - An Overview and Assessment*, provided an assessment of the functioning of the natural gas market in the Maritimes and discussed the issues facing this market. The report concluded that Maritimes gas buyers face a number of challenges that are unique to the region but that the market is functioning reasonably well, given the early state of its development.

The third report, *Short-term Natural Gas Deliverability from the Western Canada Sedimentary Basin 2003-2005*, provided an outlook for natural gas production for the period 2003-2005. The Board projected that, with the expected high levels of drilling activity, deliverability from the WCSB will be maintained near current levels of approximately 450 million cubic metres (16 billion cubic feet) per day over the next two years.

The Board also issued a major report on its long-term outlook for Canada's energy future, entitled *Canada's Energy Future: Scenarios for Supply and Demand to 2025*. Using a scenario approach, the report examined the future of energy within the context of environmental, technological and societal trends. Among other things, the report concluded that Canada will continue to depend primarily on fossil fuels to meet its energy needs over this time period. There are a number of constraints in the Canadian economy, including climate, urban design, lifestyle, and the nature of the existing building stock that limit the rate at which new technologies can be adopted. The report also found that a key uncertainty is the future availability and price of natural gas. A primary objective of the report was to stimulate informed discussion among Canadians about energy choices. To follow up, the NEB will conduct country-wide roundtable discussions on natural gas market issues.

The Board also compiles several statistical reports related to its regulatory role in the oil, gas and electricity industries. Data is compiled on a monthly basis and annual summaries, as far back as 1985, are available. Subject areas include: natural gas exports, imports, volumes and prices; exports of propane and butane; crude oil and petroleum product exports; light and heavy crude oil export prices; crude oil supply and disposition; and imports and exports of electricity. These reports are available on the Board's Web site at www.neb-one.gc.ca.

Functioning of Canadian Energy and Transportation Markets

The Board monitors energy markets to ensure that they are functioning so that Canadian energy users have access to Canadian energy on similar terms and conditions as are available to export buyers. With respect to natural gas, it would be expected that the commodity price, for example at the Alberta border, would be essentially the same for all gas buyers, whether domestic or foreign. Figure 19 shows natural gas prices at export points in eastern Canada netted back to the Alberta border compared with prices at AECO-C, the main pricing point for natural gas in Alberta, with transportation cost to the Alberta border added on.

The figure shows that prices at AECO-C are almost always equal to or lower than the equivalent prices at export points and demonstrate that, for gas purchased in Alberta, Canadians are paying no more for natural gas than are export customers.

The Board is similarly tracking prices in the British Columbia gas market and the Maritimes gas market. There are some challenges in both of these markets, mainly related to the relatively small number of buyers and sellers, which the Board is currently studying.

With respect to crude oil, a similar relationship exists between domestic and export prices (Figure 20). The chart demonstrates that Canadians have access to Canadian crude oil on price terms at least as favourable as export customers. The Board also monitors electricity markets, although this is somewhat more difficult due to the more regional nature of electric power markets, and the lack of functioning open markets in many parts of the country. However, prices paid by residential customers in Canada are generally considerably lower than in nearby cities in the United States.

In order for energy markets to work well, there has to be adequate transportation capacity to move crude oil, refined products, natural gas and natural gas liquids from producing areas to the end-users who require them. When there is adequate capacity between two pricing points, the prices will be "connected" and the price differential will be less than or equal to the cost of transportation between the two points.

FIGURE 19
Eastern Export and Domestic Gas Price at the Alberta Border
($ per gigajoule)

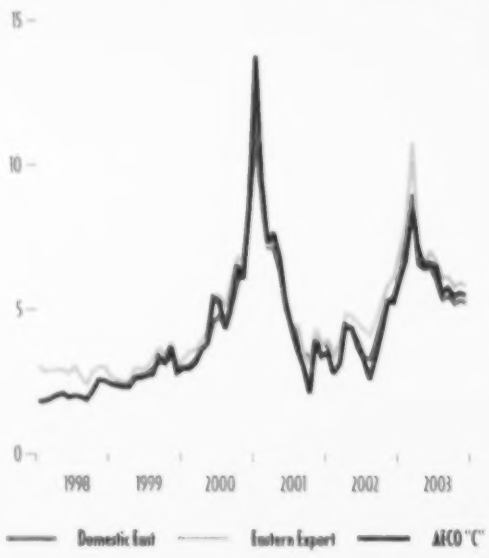


FIGURE 20
Light Crude Oil Export and Posted Price at Edmonton
($ per cubic metre)

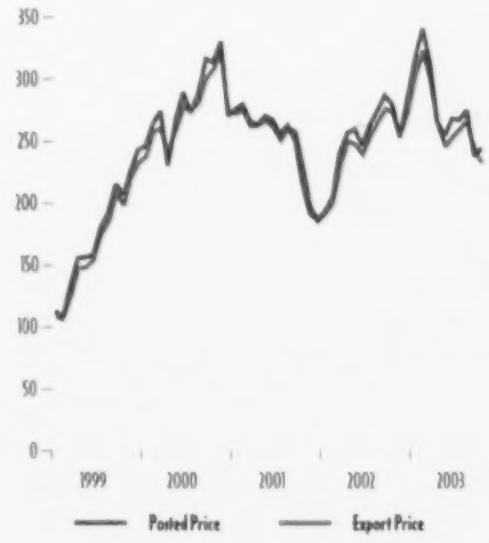


FIGURE 21
Commodity Price Differentials
($ per gigajoule)

Figure 21 shows the basis, or commodity price differential, between the Alberta border and the Dawn delivery point compared with the TransCanada firm service toll between the two points, including fuel costs. The fact that the price differential is consistently lower than the firm service transportation toll demonstrates that there has been adequate capacity in place since the fall of 1998. The Board tracks similar charts for other pipeline corridors within Canada and is satisfied that there is generally adequate natural gas pipeline capacity in place.

With respect to oil pipelines, lack of adequate pipeline capacity is experienced when shippers nominate more oil or oil products than the pipeline can carry. This normally results in a situation known as apportionment, under which each of the shippers that nominates volumes is "apportioned" a share of the available capacity.

In 2003, Enbridge operated at approximately 75 percent of total capacity, with the actual throughput averaging 218 000 m^3/d. U.S. regulators placed a pressure restriction on the U.S. portion of Enbridge's Line 4, which runs from Edmonton to Superior, Wisconsin after a rupture in July 2002 in the U.S. portion of the line. This restriction, which was in effect until December 2003, reduced the volumes of heavy crude oil that could be shipped through that line. Enbridge's Line 9, which transports oil from Montreal to Sarnia, operated at maximum capacity for most of the year. Apportionment, starting in March 2003, was calculated at five percent and reached 19 percent by September 2003, where it remained for the rest of the year.

The Terasen pipeline system, from Edmonton to Vancouver, operated at 88 percent of its light capacity during 2003. Increased shipments of heavier crude oil, as well as nominations to the Westridge Dock, contributed to several months of apportionment. Express Pipeline Ltd. continued to operate at almost 100 percent of capacity in 2003.

Propane exports to the U.S. Midwest were reduced due to a flow restriction related to a fire caused by a leak on Cochin's U.S. pipeline in July 2003. Consequently, since September 2003, the Cochin system has been in apportionment along both the Canadian and U.S. sections. The flow restriction and apportionment situation is expected to continue until late 2004.

The high rate of capacity utilization on a number of these lines, combined with growing production from the oil sands and the incidence of apportionment, may indicate that expansions of oil pipeline capacity need to be seriously examined.

Regulatory Efficiency

The Board strives to make its regulatory processes as efficient and effective as possible. While facilitating market-based solutions will still be a large component of its regulatory strategy, the Board recognizes that regulation will play an important role for some time to come. In 2003, the Board focused its efforts on providing smart regulation, the objectives of which are embodied in several themes:

- goal-oriented regulation that allows regulated companies some flexibility on how they meet the desired outcomes;
- providing clear, predictable and streamlined regulatory processes and decisions; and
- by effectively partnering with other regulatory agencies to improve processes and efficiencies.

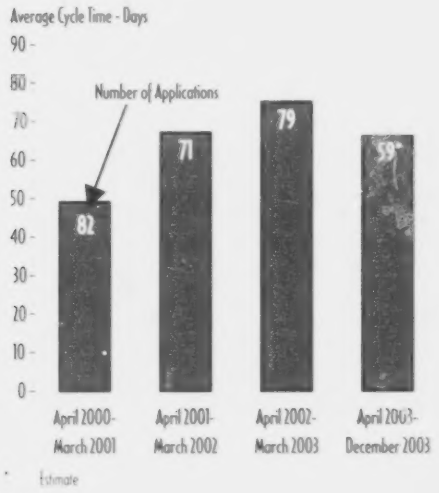
Smart Regulation

As stated previously, smart regulation was set out in the 2002 *Speech from the Throne* as a key strategy to maintain a Canadian advantage in a globally competitive world. The NEB continues to develop its own smart regulation strategy, including the provision of effective, efficient and predictable regulation.

Many energy companies operate in an international environment, in which they must decide whether to invest in Canada or in opportunities in other countries. The cost of regulatory compliance is also an important consideration for smaller companies with a domestic focus. The clarity, predictability and speed with which the regulatory regime operates in respective environments are important considerations for companies when making their investment decisions. Given these realities of the market environment, the Board's objective is to provide efficient and timely turnaround time for applications that come before it, while diligently fulfilling its responsibility to protect the public interest. The Board ensures that its application processes are efficient by internally reviewing its processes, engaging in dialogue with stakeholders, clarifying the Board's processes and expectations, implementing new approaches to regulation, negotiating with other agencies to ensure that regulatory processes are harmonized to minimize duplication, and by pro-actively preparing for major applications.

The Board's *Section 58 Streamlining Order* permits companies to undertake, without applying for Board approval, certain routine facilities projects that have insignificant environmental impact, occur on company property, and do not result in safety or third party concerns. A revised *Section 58 Streamlining Order* was issued in late 2002 to clarify the order, modify reporting requirements and exclude an increased number of routine projects from the Board's application process. Through these and other initiatives, the Board has seen its Section 58 cycle times improve (Figure 22). A review of the *Streamlining Order*, with the incorporation of the proposed new *Exclusion List Regulations* amendments under the CEA Act, is planned for 2004.

FIGURE 22
Cycle Times for all Non-Hearing Facility Applications by Fiscal Year



NEB Filing Manual

The Board is nearing completion of its project to conduct a comprehensive review and revision of its *Guidelines for Filing Requirements* (GFR). The GFR were developed to assist companies in their preparation of applications. The objective of this project is to provide applicants further clarity and understanding of the Board's expectations with respect to application requirements, and thereby reduce the number of Information Requests required and reduce application cycle times. The final *NEB Filing Manual*, which will replace the GFR, is expected to be published in the spring of 2004.

Guidance Notes for Pre-Application Meetings

Draft guidance notes for pre-application meetings have also been developed to facilitate communication between Board staff and outside parties where appropriate. The goal is to provide a helpful tool to project proponents who wish to meet with the Board prior to submitting an application, in order to prepare complete applications containing the information required for expeditious review. The Board encourages face-to-face pre-filing meetings with staff when applicants have questions about filing requirements in the context of their specific application.

Appropriate Dispute Resolution (ADR)

The Board continuously seeks ways to improve the efficiency and effectiveness of its regulatory processes. The Appropriate Dispute Resolution (ADR) program was developed in this regard. Under development since early 2002, the collection of ADR tools and techniques provides a means to resolve issues and differences among parties as an addition to our current regulatory processes. In July of 2003, the Board released its *Guidelines for Appropriate Dispute Resolution*. During 2003, the program was used to address four landowner issues and to facilitate a workshop for toll and tariff matters. The ADR guidelines are available on the Board's web site at www.neb-one.gc.ca.

Effective Cooperation

Energy projects often involve several jurisdictions, and where jurisdictions overlap, such as in the case of a potential northern pipeline proposal, the Board is working with a number of regulatory agencies to ensure that environmental assessment and regulatory issues are dealt with in a coordinated manner. Coordination efforts have been focused on eliminating duplication while maintaining or enhancing meaningful public engagement.

On an international level, the Board continues to meet regularly with the FERC and the Mexican national energy regulator, the Comisión Reguladora d'Energía. In September 2003, a

trilateral cooperation agreement was signed in which each regulator committed to regular meetings to share perspectives on regulatory approaches and to work to eliminate inconsistencies in regulatory approaches, to the extent that is possible within the respective legislative mandates.

The Board is also working closely with the Canadian Environmental Assessment Agency with a view to improving the environmental assessment process. The recent passage of *Bill C-9, An Act to Amend the Canadian Environmental Assessment Act* provides some opportunities to work with the Agency to identify process improvements.

Engaging Canadians

Ensuring effectiveness of engagement is seen as being vital to the Board's decision making process as it ensures fairness and completeness. As well, the act of providing the public with a forum in which to be heard, and providing the opportunity to be involved, speaks to protecting the rights of those affected by Board decisions. This is also part of the Board's desired outcome as reflected in Goal 2.

Goal 4: The NEB meets the evolving needs of the public to engage in NEB matters.

During 2003, the NEB actively engaged the public in many of its processes, as demonstrated by the large number of people who took part in Board-initiated consultations and public information sessions. This was true for the six-city cross country roundtable sessions held to consult on the *Supply and Demand Report*, the regional consultation that took place to develop an EMA on the functioning of the natural gas market in the Maritimes, and the open houses that took place in seven Canadian cities to discuss the proposed new *Damage Prevention Regulations*. Interest in the Board's processes was demonstrated by the number of individuals and groups who participated in recent hearing and pre-hearing activities.

The increased number of hearing participants presented challenges that the Board had not previously faced. The Board recognized this as being indicative of a new type of hearing and took the opportunity to reflect upon its public engagement efforts during its strategic planning sessions in September 2003. After re-evaluating its direction with regard to public engagement, the Board decided to shift from evaluating its general practice in the area of engagement to focusing on the effectiveness of the engagement itself.

The GSX Canada Pipeline hearing was an example of public participation by a large number of intervenors. At the information sessions held prior to the hearing, interested parties were informed of the NEB process and how to participate in the hearing. In turn, they provided information about their concerns which helped in the planning of the hearing process. In all, more than 400 people are estimated to have attended these sessions which took place between October 2001 and the commencement of the oral hearing in February 2003. Regular procedural updates were also issued frequently throughout the hearing process. These informational activities helped to ensure that interested parties were well informed and assisted in the efficiency of the hearing process.

The SE2 hearing was another example of public participation by a large number of intervenors. In addition to about 400 registered intervenors, there were more than 22,000 letters of comment received by the Board. In order to familiarize participants with Board processes, nine days of public information sessions were held. The Board also presented intervenors with options as to their chosen level of participation. In order to meet the challenges posed by having a large number of

intervenors and to allow reasonable opportunity for intervenors to present their views, the Board sat evenings and Saturdays. Twenty-eight intervenors gave oral presentations and 88 provided oral final arguments.

Building Internal Capacity

The Board believes in the importance of being a learning organization and promotes a shared learning process. To this end, the Board provides skill enhancement opportunities to enable employees to undertake effective and appropriate public engagement. The Board recognizes that effective participation and consultation start within the organization and encourages internal consultation among teams and business units within the organization.

Learning circles and best hearing practices

During 2003, post-hearing survey results assisted the NEB in developing appropriate actions to enhance the hearing process and participants' experience with the process. For instance, the feedback the Board has received has resulted in:

- enhancements to electronic filing;
- consideration of a venue change for an upcoming hearing; and
- examination of transcript quality, interpretation quality, the hearing room and access to exhibits.

The Board also initiated an internal, electronic learning circle in May 2003, thanks to the efforts of the Board's Aboriginal Engagement group. On a weekly basis they issue articles and stories relating to Aboriginal culture and practices. This electronic information series has covered topics such as land claims, misconceptions about Aboriginal culture, census information, and Aboriginal symbolism.

Dealing with disputes

Following consultation with industry, landowners, government and other interested parties, the Board released the guidelines for its ADR program in July 2003. The guidelines are intended to be flexible with parties participating in creating a resolution process that meets their unique needs. During 2003, the ADR program was used in four landowner issues and in one toll workshop.

Throughout 2003, the Board also participated in the Company to Company (C2C) Dispute Resolution Task Force. The Task Force was initiated by energy industry representatives to promote more effective and efficient ways to manage and resolve conflicts between companies. As a participant, the Board is contributing to the development of recommendations and tools that will support productive resolution of conflict in the energy sector. The Task Force report is scheduled for release in 2004.

Developing new approaches

During 2003, the Board adopted a new approach for gathering and storing information on Aboriginal Communities. A profile of Aboriginal communities affected by NEB-regulated pipelines and a database of contacts for relevant Aboriginal associations was developed for internal use as part of the Board's efforts toward building internal capacity.

In 2003, the NEB and CEPA launched *Education Series* seminars to enhance understanding of Board processes and information requirements, thereby leading to more complete applications and reduced cycle times. The first meeting of this series, held in June 2003, focused on NEB processes and an assessment of gaps historically seen in applications. The focus of the second meeting in the series, held in October 2003, was on consultation with Aboriginals and landowners from both an NEB and industry perspective.

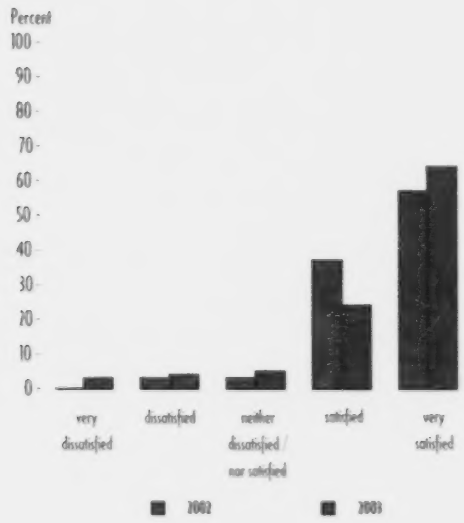
Understanding Public Engagement Needs

Understanding how the public can and wants to be involved with the Board and its processes assists the Board in offering effective public engagement options. The Board uses the following practices to gain an understanding of the public's engagement needs:

Feedback

The Board began the year by inserting reader comment cards in the 2002 *Annual Report*. The self-addressed postage-paid card asks several questions regarding readability of the document, relevance of the information and the reader's overall satisfaction with the publication. The comment card was also placed in the *Supply and Demand Report* and the Board's general *Information Series*. Feedback to date has been compiled and shared internally to assist in planning future versions of these publications.

FIGURE 23
Overall, how satisfied were you with your interaction with the NEB?



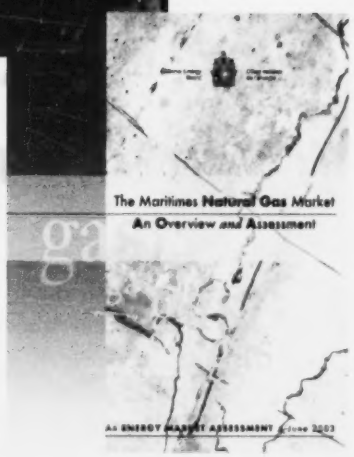
As proven in the past, the Board's post-hearing surveys were a valuable way to collect participants' feedback on the Board's hearing process. The NEB now shares the consolidated results of the post-hearing surveys (for the fiscal year) on its Web site at www.neb-one.gc.ca. The results and accompanying comments have also been shared internally. Comments received from Board hearing participants have resulted in ongoing enhancements to electronic filing and hearing processes as mentioned previously in the *Learning Circles and Best Hearing Practice* section.

Asking for feedback through satisfaction surveys is becoming standard practice at the Board, as shown in the variety of activities in which it was used throughout 2003. The Board obtained feedback from participants in the *Oil Sands EMA* consultations, the *Supply and Demand Report* consultations, the proposed new *Damage Prevention*

Regulations open houses and the 2003 NEB Workshop.

Board Visits

Board Members periodically visit NEB-regulated energy facilities in different regions of Canada to gather first hand information about energy matters. In 2003, Board Members visited a gas plant and various pipeline right-of-way locations in the Ladyfern region of north-eastern British Columbia. At the Canadian Natural Resources Limited's (CNRL) gas plant, Board Members were briefed on gas plant design, operation and safety procedures. Board Members observed cumulative forest disturbance related to gas exploration and production, and viewed vegetation recovery and other environmental aspects of pipeline right-of-way design in the western boreal forest.



Removing Barriers to Participation

In June 2003, the Board released the EMA entitled *The Maritimes Natural Gas Market - An Overview and Assessment* in Fredericton, New Brunswick. A technical briefing by Board staff was held at the time of the release, with interested persons and the media invited to access the technical briefing by telephone.

The Board used a video conference and Web-based simultaneous broadcast to gather more information about a Trans Northern application. This was found to be an efficient way of interacting with the applicant as well as interested parties.

In December 2003, the Northern Gas Project Secretariat opened in Yellowknife, NWT. The role of the Secretariat is to provide information management, logistics, communications and administrative support to the public hearing panels for the environmental impact assessment and regulatory review of a proposed Mackenzie Valley Gas Project. The opening of the Secretariat is a result of the *Cooperation Plan for the Environmental Impact Assessment and the Regulatory Review of A Northern Gas Pipeline Proposal Project Through the Northwest Territories* (June 2002). The Cooperation Plan coordinates processes between regulators and government departments in anticipation of a northern pipeline application. The Board participated in the Cooperation Plan and in the opening of the Secretariat.

The Board developed two information videos in 2003. The first is a general video on the roles and responsibilities of the NEB and the second is an educational video on the hearing process. These are additional tools that can be used to assist in familiarizing participants with the NEB and the hearing process itself, making the Board a more accessible entity. The videos will be

available in 2004. For a copy, please contact the publications officer at publications@neb-one.gc.ca or call (403) 299-3562.

In 2003, the Board released *Pipeline Regulation in Canada: A Guide for Landowners and the Public.* This publication uses the lifecycle of a pipeline to explain, step by step, the Board's role and the landowner's role in the Board's decision making process. A copy of this guide can viewed on the NEB Web site at www.neb-one.gc.ca or by contacting a Publications Officer at publications@neb-one.gc.ca.

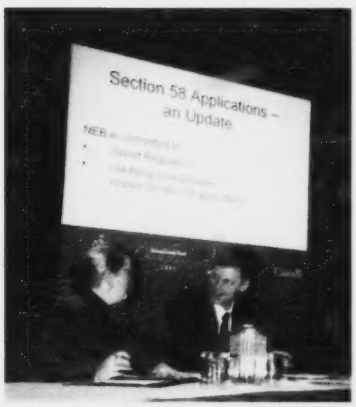
Involving Canadians

Consultation has been used extensively throughout 2003 and has resulted in meaningful engagement with industry and non-industry stakeholders. As well, NEB-hosted workshops focused on sharing information with the members of the public and industry, and facilitated discussion of common interest issues.

Consultations

Over the past year, the Board continued with several series of consultations initiated in 2002. This included meeting with several groups to discuss the proposed *NEB Filing Manual.* These groups included Aboriginal groups in Edmonton, Sarnia, Ottawa, Fredericton and Truro, other government departments, and the World Wildlife Fund, as well as industry groups and representatives. Public consultations were also held in six cities across Canada to obtain comments on a draft of *Canada's Energy Future: Scenarios for Supply and Demand to 2025.* As well, the NEB's Market Monitoring Team returned to the Maritimes in 2003 to meet with stakeholders in the wholesale natural gas market to discuss access to supply, market and transportation issues with key players in the region's natural gas market, and to gather information for the EMA report *The Maritimes Natural Gas Market - An Overview and Assessment.* Each of these consultation series sought feedback which was taken into consideration when completing the final documents.

The NEB also regularly meets with the Cost Recovery Liaison Committee, a joint committee of industry representatives subject to cost recovery charges and NEB staff. The mandate of the committee is to discuss NEB cost recovery methodology and regulations, and to provide a forum to explain the NEB's financial statements, planned expenditures, goals and initiatives. The committee meets twice a year.



Workshops

E-filing (June 2003) - The purpose of this one-day technical meeting was to exchange ideas on how to improve the Board's e-filing services. E-filing allows applicants and intervenors the option of submitting regulatory documents electronically and provides all Canadians with the opportunity to view these documents on-line. In 2003, 2 146 regulatory documents were submitted using the e-filing system. In June 2003, users of the

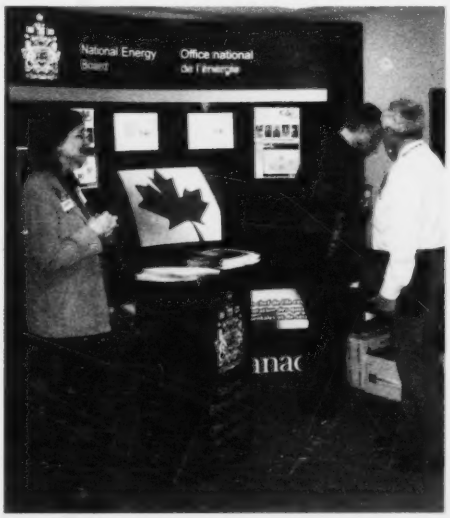
Board's e-filing services were invited to engage in a discussion about benefits of the current e-filing system and where improvements could be made. Transcripts of the meeting were sent to participants and are posted on the Board's Web site. As a result of the suggestions made by e-file users, the Board plans to make several improvements to the system including: adding on-line forms to file Interventions and Letters of Comment; revising placeholders so that they are easier to identify and create; displaying filings in reverse chronological order; and improving user interface.

TransCanada Toll and Tariff Matters (October 2003) - The Board facilitated a workshop in Toronto with TransCanada and its shippers. The purpose of the workshop was to identify the issues that were raised by an application for a new receipt and delivery point, and to discuss the possible process options for resolving these issues. A facilitator's report was produced which included the issues raised by participants and preferences for process steps for the application.

2003 NEB Workshop (December 2003) - The NEB held its second workshop in Calgary. The workshop focussed on four themes: pipeline integrity; environmental protection; regulatory initiatives and safety. The goals of the workshop were to:

- encourage direct interaction between NEB staff and workshop participants;
- provide clear deliverables where practical;
- structure meaningful and constructive discussions between NEB staff and representatives from stakeholder groups; and
- improve working relationships by explaining NEB expectations, processes and procedures.

With more than 300 attendees, feedback from participants was largely positive with more than 96 percent of post-workshop survey respondents indicating they were satisfied with the workshop. Eighty-eight percent of attendees felt the workshop was worthwhile and 82 percent indicated they plan to attend the next workshop, currently scheduled for 2005.



Communicating with Canadians

Web site

During 2003, the Board continued increasing its Web site accessibility for Canadians by providing easier navigation and readability for those visually impaired and making Board documents more readable in most Web browsers. The Board also continued to provide on-line broadcasts of its hearings and made transcripts of the hearings available on its Web site.

The Board also worked on providing easier means for stakeholders to forward standard information. This was achieved by the Contact Management Group who developed an on-line change of contact information form. This can be accessed from the Board's home page and is to be used to change contact information for those receiving non-regulatory documents and information.

News Releases

The Board issued 46 news releases in 2003. The nature of the releases has included information on public hearings, public information sessions, Board decisions on applications, invitations to consultations and publication releases.

Toll-free number (1-800-899-1265)

The Board's toll free number is another channel by which Canadians can contact the NEB. In 2003, 5 240 calls were received on the toll free line, an increase of approximately 240 calls from 2002.

Effective Leadership and Management

In 2003, a fifth corporate goal was added to highlight the NEB's commitment to developing a learning environment and the prudent management of resources, including financial, human resources, and information resources. The Board's program for management improvement, the IMProve (Improved Management Practices) project, is modeled after the government-wide Modern Comptrollership initiative.

Developed as a progressive step in a continuum of management improvement initiatives, Goal 5 integrates planning and reporting activities related to human resources, finance, information technology (IT), information management, training and performance management. It also serves to integrate processes for applications, inspections, and audits to promote enhanced coordination and knowledge and information sharing across the NEB. Goal 5 provides a focus on accountability leading to effectiveness and efficiency of leadership and management across all NEB Goals.

Goal 5: The NEB is effective in leading its people and managing its resources.

In order to measure the NEB's performance in relation to Goal 5, the Board began developing performance measures related to leadership, human resources management, resources, and information management during 2003. Benchmarking is planned in the future.

NEB's Expenditures and Financial Reporting

The NEB's expenditures and staff levels for the last eight fiscal years are shown in Table 10. Funding for the NEB is provided by the Government of Canada. The government, in turn, recovers costs from the companies that the NEB regulates. Since 1991, up to 90 percent of the NEB's operating costs have been recovered from the regulated industries. Additional information on budgets and plans may be found in the NEB's *2003-2004 Main Estimates, Part II* and the *2003-2004 Estimates Part III - Report on Plans and Priorities*, both of which are available on the NEB's Web site.

To meet Treasury Board's fiscal year end requirements and the cost recovery calendar year requirements, the NEB prepares two sets of annual financial statements. The first set is prepared on a fiscal year period ending March 31 using the accrual basis of accounting in accordance with Treasury Board of Canada Accounting Standards based on Canadian Generally Accepted Accounting Principles. This set of financial statements, which form part of the Public Accounts of Canada, consists of a Statement of Financial Position, Statement of Operations, Statement of Cash Flow and accompanying notes. The Office of the Auditor General determines when or if it will audit the NEB's Public Accounts financial

statements in order to express an opinion on the consolidated statements of the Government of Canada.

The second set of financial statements, for cost recovery purposes, is prepared on a calendar year period using the accrual basis of accounting in accordance with Treasury Board of Canada Accounting Standards based on Canadian Generally Accepted Accounting Principles. This set of financial statements consists of a Statement of Financial Position, Statement of Operations and Deficit of Canada, Statement of Cash Flows and accompanying notes. These statements are audited by the Office of the Auditor General on an annual basis and are used as the basis for determining the costs recovered in accordance with the *National Energy Board Cost Recovery Regulations*.

Further information on either set of financial statements can be obtained by contacting the NEB. The consolidated financial statements for the Government of Canada can be found at www.pwgsc.gc.ca/recgen/text/pub-ace-e.html. The audited financial statements for cost recovery purposes can be located on the Board's Web site at www.neb-one.gc.ca/pubs/index_e.htm.

NEB as a Separate Employer

The NEB has been a separate employer since December 1992. As a Public Service *separate* employer, the authority to carry out personnel management functions has been transferred from Treasury Board to the Chairman of the NEB. This means that the NEB is solely responsible for creating and maintaining its own classification system, developing its own human resources management policies and practices, and negotiating its own collective agreements and pay plans.

TABLE 10
Historical Expenditures and Staffing

Fiscal Year (April 1 to March 31)	Expenditures ($000)	Full-time Equivalents
1996 - 1997	26 855	272
1997 - 1998	28 048	264
1998 - 1999	53 187 [a]	277
1999 - 2000	26 900	286
2000 - 2001	26 216	289
2001 - 2002	28 836	286
2002-2003	31 232	287
2003 - 2004	31 315 [b]	297 [b]

(a) In 1998 the NEB made payments of $22.1 million for out of court settlements with the energy industry relating to relocation costs of the NEB from Ottawa to Calgary.

(b) Estimate

A *separate* employer is not the same as a "private" employer. Like other federal government departments, the NEB continues to be bound by federal legislation. The NEB promotes and recruits personnel under the *Public Service Employment Act*. Financial matters are governed by the *Financial Administration Act* as administered by Treasury Board. Employer and employee relations are governed by the *Public Service Staff Relations Act* and the NEB is subject to public service reductions and public service wage restraints. The NEB is also subject to the provisions and standards set out in the *Official Language Act* and *Employment Equity Act*.

A Wealth of Experience

As of 31 December 2003, Board membership consisted of eight full-time members who were appointed based upon their wide range of expertise in energy matters and public policy. Our multi-disciplinary team reflects the diverse perspectives and the practical knowledge required for making decisions on energy projects in the interests of Canadians and for advising the Government of Canada on energy issues. Members have private and public sector experience in economics, engineering, environment, finance, law, public participation, safety and science.

Top left to right: Gaétan Caron, Jean-Paul Théorêt (Vice-Chairman), John S. Bulger, Rowland J. Harrison
Bottom left to right: Deborah W. Emes, Kenneth W. Vollman (Chairman), Elizabeth Quarshie, Carmen L. Dybwad

Kenneth W. Vollman, Chairman

A native of Saskatchewan, Mr. Vollman has a Master's degree in Mechanical Engineering from the University of Saskatchewan and is a member of the Association of Professional Engineers of Alberta. Mr. Vollman has spent his career working in the energy sector, gaining his practical experience with oil and gas production while working in the private sector. During his career at the NEB, Mr. Vollman gained experience in energy supply and demand, pipelines, energy regulatory issues and management. In 1998, he was designated as Chairman after serving as a Member and Vice-Chairman. Over the past 35 years, Mr. Vollman has authored and presented numerous papers at Canadian and international conferences.

Jean-Paul Théorêt, Vice-Chairman

A native of Quebec, Mr. Théorêt has a diverse educational and professional background in business, economics, law and energy regulation. Mr. Théorêt was a Commissioner of the Régie de l'énergie in Quebec for eight years. He was elected to the Quebec National Assembly in 1985 where he served as Parliamentary Assistant to the Minister of Industry, Trade and Technology, as well as Vice-Chairman of the Committee on Labour and the Economy. Mr. Théorêt has 30 years of business experience, serving as an Executive Vice President of a large food distribution company and owner of food stores in Quebec. A member of the NEB since 1999, he was designated Vice-Chairman in 2002.

Rowland J. Harrison

Originally from Australia, Mr. Harrison has a Master of Laws degree from the University of Alberta and is a member of the bars of Nova Scotia, Ontario and Alberta. He has gained extensive advisory, consulting and research experience in various aspects of energy regulation and policy during his career.

As a Professor of Law at various Canadian universities, Mr. Harrison taught Oil and Gas Law, Advanced Petroleum Law, Constitutional Law and Administrative Law. He has held senior management positions with a number of organizations including Canada Oil and Gas Lands Administration, the Canadian Institute of Resources Law, the Institute for Research on Public Policy and the Dalhousie Institute of Environmental Studies. Before his appointment to the Board, he was a partner in the Calgary office of Stikeman Elliott, a national and international Canadian law firm.

John S. Bulger

Originally from Manitoba, Dr. Bulger has a Ph.D. in Physical Chemistry from York University in Toronto, as well as a Graduate Management Diploma from McGill University in Montreal. He has experience in procurement, operations, planning, regulatory affairs and providing advice on energy issues. Prior to being appointed to the Board, he held the position of Senior Manager, Regulatory Affairs at Maritimes and Northeast Pipeline in Halifax, Nova Scotia. He also spent almost 20 years at Gaz Métropolitain in Montreal, Quebec in various senior management positions. He began his career at DuPont of Canada Ltd. Dr. Bulger is a member of the Chemical Institute of Canada.

Elizabeth (Liz) Quarshie

Originally from Ghana, Ms. Quarshie has a Master's degree in Business Administration from the University of Saskatchewan and a Master of Science degree in Environmental Engineering from Washington State University. She is a member of the Association of Professional Engineers and Geoscientists of Saskatchewan and is a Certified Professional Environmental Auditor.

Ms. Quarshie has more than 15 years experience in the energy sector and has held a portfolio of senior management positions at Cogema Resources Inc. and Cameco in Saskatoon, and

directed programs such as occupational health and safety, environmental impact assessments, compliance and public affairs. She also has extensive industry experience in project planning and design, development, implementation, monitoring and decommissioning. Ms. Quarshie has experience in radiation protection, air pollution control, solid and hazardous waste management, water and wastewater treatment, research and evaluation, environmental management systems, audits and community development.

Deborah W. Emes

Originally from Saskatchewan, Ms. Emes has a Master of Arts in Economics from the University of Calgary and is a Chartered Financial Analyst. She has practical and academic expertise in providing regulatory, economic and market advice. Ms. Emes has held positions in the public and private sectors, including Manager, Strategic Services for the British Columbia Utilities Commission. She has taught rate design and cost of capital training seminars for the Canadian Association of Members of Public Utility Tribunals.

Carmen L. Dybwad

A native of Saskatchewan, Dr. Dybwad has a Ph.D. in Regional Planning and Resource Development from the University of Waterloo. She has an educational background in economics as well as practical and academic expertise in public participation, resource development and the electricity sector. Dr. Dybwad has held several positions with the Government of Saskatchewan and the Saskatchewan Power Corporation, including Manager of Environmental Policy and Planning. Most recently, she was an assistant professor at the University of Regina where she taught classes in ecological economics, sustainable development and public administration. Dr. Dybwad is a volunteer with the Wood's Homes Foundation and a member of the Alberta Arbitration and Mediation Association.

Gaétan Caron

Originally from Quebec, Mr. Caron obtained his Bachelor of Applied Sciences degree from Laval University and his Master of Business Administration degree from the University of Ottawa. Mr. Caron joined the NEB in 1979, where he has held several senior positions. Prior to his appointment as a Board Member, he held the position of Chief Operating Officer. Mr. Caron is a member of several organizations including the Association of Professional Executives of the Public Service of Canada, the Quebec Order of Engineers, the Board of Directors of the Calgary United Way, and the Diversity Calgary Leadership Council.

Bryan Williams, Temporary Board Member

In September 2001, the Honourable Bryan Williams was appointed as a temporary Board Member for the purpose of matters related to the Joint Review Panel of the GSX Canada Pipeline Project.

Supplement I

Acts

National Energy Board Act
Canada Labour Code, Part II
Canada Oil and Gas Operations Act
Canada Petroleum Resources Act
Canadian Environmental Assessment Act
Energy Administration Act
Mackenzie Valley Resource Management Act
Northern Pipeline Act
Species at Risk Act

Regulations and Orders Pursuant to the *National Energy Board Act*

National Energy Board Act Part VI (Oil and Gas) Regulations
National Energy Board Cost Recovery Regulations
National Energy Board Electricity Regulations
National Energy Board Export and Import Reporting Regulations
National Energy Board Gas Pipeline Uniform Accounting Regulations
National Energy Board Oil Pipeline Uniform Accounting Regulations
National Energy Board Oil Product Designation Regulations
National Energy Board Onshore Pipeline Regulations, 1999
National Energy Board Order No. MO-62-69
National Energy Board Pipeline Crossing Regulations, Part I
National Energy Board Pipeline Crossing Regulations, Part II
General Order No. 1 Respecting Standard Conditions for Crossings by Pipelines
General Order No. 2 Respecting Standard Conditions for Crossings of Pipelines
National Energy Board Power Line Crossing Regulations
National Energy Board Processing Plant Regulations (SOR/2003-39)
National Energy Board Rules of Practice and Procedure, 1995
National Energy Board Substituted Service Regulations
Pipeline Arbitration Committee Procedure Rules, 1986
Proclamation Extending the Application of Part VI of the Act to Oil (May 7, 1970)
Regulations amending the National Energy Board Cost Recovery Regulations (SOR/2002-375) 21 October 2002.
Toll Information Regulations
Section 58 Streamlining Order XG/XO-100-2002

Guidelines, Guidance Notes and Memoranda of Guidance pursuant to the *National Energy Board Act*

Adherence to Environmental Information Requirements under the Board's *Guidelines for Filing Requirements* (23 December 1997)
Consultation with Aboriginal Peoples: National Energy Board Memorandum of Guidance, (4 March 2002)

Filing of Supply Information in Compliance with the Board's Part VI (Oil and Gas) Regulations (16 May 1997)
Filing Procedures for Section 104 Right of Entry Order Applications (27 October 1999)
Financial Regulatory Audit Policy of the National Energy Board (23 February 1999)
Guidance Notes for the *Onshore Pipeline Regulations, 1999* (7 September 1999)
Guidance Notes for the *Onshore Pipeline Regulations, 1999* - Amendment 1 (20 January 2003)
Guidance Notes for Pressure Equipment under National Energy Board Jurisdiction (8 August 2003)
Guidance Notes for the *Processing Plant Regulations* (28 July 2003) including: Appendix I - Guidance Notes for the Design, Construction, Operation and Abandonment of Pressure Vessels and Pressure Pipeline (3 July 2003) and Appendix II - Security and Emergency Preparedness and Response Programs (24 April 2002)
Guidelines for Filing Requirements (22 February 1995)
Guidelines for Negotiated Settlements of Traffic, Tolls and Tariffs (12 June 2002)
Guidelines Respecting the Environmental Information to be Filed by Applicants for Authorization to Construct and Operate Gas Processing and Straddle Plants, Liquid Natural Gas (LNG) Plants and Terminals, Natural Gas Liquids (NGL), Liquid Propane Gas (LPG) and Butane Plants and Terminals, under Part III of the *National Energy Board Act* (26 June 1986)
Investigative Digs and Related Pipeline Repairs/Replacements (2 December 2002)
Investigative Digs and Related Pipeline Repairs/Replacements (26 February 2003)
Letters dated 20 November 2003 and Draft National Energy Board Guidance Notes for Pre-Application Meetings
Memorandum of Guidance - Electronic Filing, *National Energy Board Rules of Practice and Procedure*, 1995 (21 March 2002)
Memorandum of Guidance - Concerning Full Implementation of the September 1988 Canadian Electricity Policy (Revised 23 January 2003)
Memorandum of Guidance - Implementation of the Fair Market Access Procedure for the Licensing of Long-term Exports of Crude Oil and Equivalent (17 December 1997)
Memorandum of Guidance - Regulation of Group 2 Companies (6 December 1995)
Memorandum of Guidance - Retention of Accounting Records by Group 1 Companies Pursuant to *Gas/Oil Pipeline Uniform Accounting Regulations* (30 November 1994)
Memorandum of Guidance - Financial Information Submitted to the National Energy Board by Group 1 Pipeline Companies (6 December 2001)
Security and Emergency Preparedness and Response Programs (includes document entitled Expected Elements for Emergency Preparedness and Response Programs) (24 April 2002)

Regulations Pursuant to the *Canada Oil and Gas Operations Act*

Canada Oil and Gas Certificate of Fitness Regulations
Canada Oil and Gas Diving Regulations
Canada Oil and Gas Drilling Regulations
Canada Oil and Gas Geophysical Operations Regulations
Canada Oil and Gas Installations Regulations
Canada Oil and Gas Operations Regulations
Canada Oil and Gas Production and Conservation Regulations
Oil and Gas Spills and Debris Liability Regulations

Guidelines and Guidance Notes pursuant to the *Canada Oil and Gas Operations Act*

Guidance Notes for Applicant - Applications for Declaration of Significant Discovery and Commercial Discovery

Guidance Notes for the *Canada Oil and Gas Diving Regulations*

Guidance Notes for the *Canada Oil and Gas Drilling Regulations*

Guidelines Respecting Physical Environmental Programs during Petroleum Drilling and Production Activities on Frontier Lands

Notice of Revised Offhore Waste Treatment Guidelines (21 August 2002)

Regulations Pursuant to the *Canadian Environmental Assessment Act*

Comprehensive Study List Regulations

Exclusion List Regulations

Federal Authorities Regulations

Inclusion List Regulations

Law List Regulations

Projects Outside Canada Environmental Assessment Regulations

Regulations Respecting the Co-ordination by Federal Authorities of Environmental Assessment Procedures and Requirements

Regulations Pursuant to the *Canada Labour Code, Part II*

Canada Occupational Safety and Health Regulations

Oil and Gas Occupational Safety and Health Regulations

Safety and Health Committees and Representatives Regulations

Regulations Pursuant to the *Mackenzie Valley Resources Management Act*

Exemption List Regulations

Mackenzie Valley Land Use Regulations

Preliminary Screening Requirement Regulations

Regulations Pursuant to the *Northern Pipeline Act*

Northern Pipeline Notice of Objection Regulations

Northern Pipeline Socio-Economic and Environmental Terms and Conditions for Northern British Columbia

Northern Pipeline Socio-Economic and Environmental Terms and Conditions for the Province of Alberta

Northern Pipeline Socio-Economic and Environmental Terms and Conditions for the Province of Saskatchewan

Northern Pipeline Socio-Economic and Environmental Terms and Conditions for Southern British Columbia

Northern Pipeline Socio-Economic and Environmental Terms and Conditions for the Swift River Portion of the Pipeline in the Province of British Columbia

Order Designating the Minister for International Trade as Minister for Purposes of the Act

Transfer of Duties, in Relation to the Pipeline, of Certain Ministers Under Certain Acts to the Member of the Queen's Privy Council for Canada Designated as Minister for Purposes of the Act

Transfer of Duties, in Relation to the Pipeline, of the National Energy Board Under Parts I, II and III of the *Gas Pipeline Regulations* to the Designated Minister for Purposes of the Act

Transfer of Powers, Duties and Functions (Kluane National Park Reserve Lands) Order
Transfer of Powers, Duties and Functions (Territorial Lands) Order

Guidelines and Guidance Notes pursuant to the *Species at Risk Act*

The Coming into Force of Specific Sections of the Federal *Species at Risk Act*, S.C. 2002, c.-29 and its Effect on Applications before the National Energy Board (letter dated 11 September 2003)

Supplement II

Companies with Facilities or Activities Regulated by the NEB

The following pipeline companies and electric power entities construct or operate interprovincial or international pipelines or power lines under the NEB's jurisdiction, as of 31 December 2003. The pipeline companies have been divided into two groups. Group 1 gas and oil pipelines are the major pipeline companies subject to active regulatory oversight by the NEB. Group 2 consists of all other pipeline companies under the NEB's jurisdiction. For purposes of cost recovery, there are three classifications for companies: large, intermediate and small. The criteria for determining a company's classification are based on its size, throughput, cost of service, and use by third parties.

Group 1 Gas Pipeline Companies

Alliance Pipeline Ltd.
Foothills Pipe Lines Ltd.
Gazoduc Trans Québec & Maritimes Inc.
Maritimes and Northeast Pipeline Management Ltd.
TransCanada PipeLines Limited
TransCanada PipeLines Limited, B.C. System
Westcoast Energy Inc.

Group 1 Oil and Products Pipeline Companies

Cochin Pipe Lines Ltd.
Enbridge Pipelines Inc.
Enbridge Pipelines (NW) Inc.
Terasen Pipelines (Trans Mountain) Inc.
Trans-Northern Pipelines Inc.

Group 2 Gas Pipeline Companies

AltaGas (Sask) Inc.
AltaGas Services Inc.
AltaGas Suffield Pipeline Inc.
AltaGas Transmission Ltd.
ARC Resources Ltd.
Barrington Petroleum Ltd.
Bear Paw Processing Company (Canada) Ltd.
Bellator Exploration Inc.
BP Canada Energy Company
Canada Customs and Revenue Agency
Canadian Hunter Exploration Ltd.
Canadian Natural Resources Limited
Canadian-Montana Pipe Line Corporation
Centra Transmission Holdings Inc.
Champion Pipeline Corporation Limited
Chief Mountain Gas Co-op Ltd.
DEFS Canada L.P.
Devon Energy Canada Corporation
ELAN Energy Inc.
Enbridge Gas Distribution Inc.
EnCana Border Pipelines Limited
EnCana Ekwan Pipeline Inc.
EnCana Oil & Gas Co. Ltd.
EnCana Oil & Gas Partnership
EnCana West Ltd.
Fletcher Challenge Oil and Gas Inc.
Forty Mile Gas Co-op Ltd.
Gibson Energy Ltd.
GSX Canada Limited Partnership
Huntingdon International Pipeline Corporation
Husky Oil Operations Ltd.
KeySpan Energy Canada Company
Many Islands Pipe Lines (Canada) Limited
Mid-Continent Pipelines Limited
Minell Pipeline Limited
Montreal Pipe Line Limited
Murphy Canada Exploration Company
Murphy Oil Company Ltd.
Niagara Gas Transmission Limited
Northstar Energy Corporation

Olympia Energy Inc.
Paramount Transmission Ltd.
Peace River Transmission Company Limited
Pengrowth Corporation
Penn West Petroleum Ltd.
Petrovera Resources Ltd.
Pioneer Natural Resources Canada Inc.
Portal Municipal Gas Company Canada Inc.
Regent Resources Ltd.
Renaissance Energy Ltd.
St. Clair Pipelines Management Inc.
Samson Canada, Ltd.
Shiha Energy Transmission Ltd.
Sierra Production Company
Suncor Energy Inc.
Talisman Energy Inc.
Taurus Exploration Canada Ltd.
Union Gas Limited
Vector Pipeline Limited Partnership
3398251 Canada Ltd.

Group 2 Oil and Products Pipeline Companies

Amoco Canada Petroleum Company Ltd.
Aurora Pipe Line Company
BP Canada Energy Company
ConocoPhillips Canada Limited
Dome Kerrobert Pipeline Ltd.
Dome NGL Pipeline Ltd.
Enbridge Pipelines (Westspur) Inc.
Ethane Shippers Joint Venture
Express Pipeline Limited Partnership
Genesis Pipeline Canada Ltd.
Glencoe Resources Ltd.
Husky Oil Limited
Imperial Oil Resources Limited
ISH Energy Ltd.
Montreal Pipe Line Limited
Murphy Oil Company Ltd.
Nexen Marketing
NOVA Chemicals (Canada) Ltd.
PanCanadian Kerrobert Pipeline Ltd.
Paramount Transmission Ltd.
Penn West Petroleum Ltd.
Plains Marketing Canada, L.P.
PMC (Nova Scotia) Company
Pouce Coupé Pipe Line Ltd. as agent and general partner of the Pembina North Limited Partnership
PrimeWest Energy Inc.
Provident Energy Pipeline Inc.
Renaissance Energy Ltd.
Resolution Resources Ltd.
SCL Pipeline Inc.
Shell Canada Products Limited
Taurus Exploration Canada Ltd.
Williams Energy (Canada) Pipeline, Inc.
Yukon Pipelines Limited

Commodity Pipeline Companies

Abitibi-Consolidated Company of Canada
E.B. Eddy Forest Products Ltd.
Fraser Papers Inc. (Canada)
Genesis Pipeline Canada Ltd.
Penn West Petroleum Ltd.
Souris Valley Pipeline Limited

Electric Power Companies[10]

(*Indicates that the company's authorizations expired or were revoked during 2003.)

Abitibi-Consolidated Inc.
Advantage Energy, Inc.
Aquila Merchant Services, Inc. *
Aquila Networks Canada (British Columbia) Ltd.
ATCO Electric Ltd. and ATCO Power Ltd.
Avista Energy, Inc.
Bonneville Power Administration
BP Canada Energy Company
Brascan Energy Marketing Inc.
British Columbia Hydro and Power Authority
Canadian Niagara Power Company Limited
Canadian Niagara Power Inc. *
Canadian Transit Company, The
Candela Energy Corporation
Cargill-Alliant Trading Canada, Inc.
Cedars Rapids Transmission Co.

10 Those companies with an NEB electricity export authorization or a certificate or permit for an international power line.

Chandler Energy Inc.
CMS Marketing, Services and Trading Company
Columbia Power Corporation
Conectiv Energy Supply Inc.
Constellation Power Source, Inc.
Consumers Energy Company
Coral Energy Canada Inc.
Detroit & Windsor Subway Company, The
Detroit Edison Company, The
Direct Commodities Trading Inc.
Direct Energy Marketing Inc.
Direct Energy Marketing Limited *
DTE Energy Trading, Inc.
Duke Energy Marketing Canada Corp.
Duke Energy Marketing Canada Ltd.
Dynegy Canada Inc. *
Dynegy Power Marketing, Inc.
Edison Mission Marketing & Trading, Inc.
El Paso Merchant Energy, L.P. *
Emera Energy Inc.
Encana Energy Services Inc.
Engage Energy Canada, L.P.
Engage Energy US, L.P.
ENMAX Energy Marketing Inc.
Entergy Power Marketing Corp.
Entergy-Koch Trading Canada (ULC)
EPCOR Merchant and Capital Inc.
Exelon Generating Company, LLC
Farms (including cottage and isolated loads)
FortisOntario Inc.
Fraser Paper Inc. (Canada)
Hydro One Networks Inc.
Hydro-Québec
IDACORP Energy L.P. *
Independent Electricity Market Operator
Inland Pacific Energy Services Ltd.
Lac La Croix Power Authority
Manitoba Hydro
Marketing D'Énergie HQ Inc.
Mirant Americas Energy Marketing, L.P.
Montwegan International Energia Resorce Inc.
Montenay Inc.
Morgan Stanley Capital Group Inc.
New Brunswick Power Corporation
Nexen Marketing
Northern States Power Company
NorthPoint Energy Solutions Inc.
Nova Scotia Power Inc.
NRG Power Marketing, Inc.
OGE Energy Resources, Inc.
Ontario Power Generation Inc.
Ontario Hydro Interconnected Markets Inc.
PG&E Energy Trading - Power L.P.
Powerex Corp.
PPL EnergyPlus, LLC
Public Service Company of Colorado
Reliant Energy Services Canada, Ltd.
Roseau Electric Cooperative Inc.
Saskatchewan Power Corporation
Sempra Energy Trading Corp.
Sonat Power Marketing Inc. and Sonat Power Marketing, L.P.
Split Rock Energy LLC
St. Clair Tunnel Company
Teck Cominco Metals Ltd.
Tractebel Energy Marketing Inc.
TransAlta Energy Marketing Corp. and TransAlta Energy Marketing (U.S.) Inc.
TransCanada Energy Ltd.
TransCanada Power Marketing Inc.
UBS AG, London Branch
USGen New England, Inc.
UtiliCorp Networks Canada (British Columbia) Ltd.
Williams Energy Marketing & Trading Canada, Inc.
WPS Canada Generation, Inc.

Supplement III

Documents

Information Bulletins

The Board publishes Information Bulletins on the subjects listed below:

- The Public Hearing Process
- How to Participate in a Public Hearing
- Traffic, Tolls and Tariffs
- Electricity
- Protection of the Environment
- Pipeline Tolls and Tariffs: A Compendium of Terms
- Pipeline Safety

The Board also publishes the following brochures:

- Living and Working Near Pipelines - Landowner Guide, 2002
- Excavation and Construction near Pipelines, January 2002

Information Series

The Board publishes the following Information Series:

- Answers to your Questions
- Library and Information Services
- Frontier Information Office
- Pipeline Regulation in Canada: A Guide for Landowners and the Public, June 2003

Videos

Two informational videos are available. The first is a general video on the roles and responsibilities of the NEB and the second is an educational video on the hearing process. For a copy, please contact the publication officer at publications@neb-one.gc.ca or call (403)299-3562.

Major Documents Published in 2003

International Power Lines

New Brunswick Power Corporation
Authorization to construct and operate an international power line
EH-2-2002
Reasons for Decision, May 2003

Pipeline Facilities

Westcoast Energy Inc.
Southern Mainline Expansion
GH-1-2002
Reasons for Decision, January 2003

Westcoast Energy Inc.
GSX Concerned Citizens Coalition notice of application for review
Southern Mainline Expansion
Letter Decision, 26 March 2003

Georgia Strait Crossing Pipeline Limited
Notice of motion by GSX Concerned Citizen's Coalition, GH-4-2001
Letter Decision, 8 July 2003

GSX Canada Pipeline Project
Construction and Operation of a Natural Gas Pipeline, GH-4-2001
Joint Review Panel Report, July 2003

Trans-Northern Pipeline Inc.
Capacity expansion and line reversal facilities, OH-1-2003
Reasons for Decision, July 2003

EnCana Ekwan Pipeline Inc.
Construction and operation of the Ekwan Pipeline, GH-1-2003
Reasons for Decision, September 2003

Georgia Strait Crossing Pipeline Limited
Authorizing the construction and operation of the GSX Canada Pipeline GH-4-2001
Reasons for Decision, November 2003

Trans-Northern Pipeline Inc.
Section 58 application, OHW-1-2003
Reasons for Decision, November 2003

Tolls and Tariffs

TransCanada PipeLines Limited
Review and variance of cost of capital decision, RH-R-1-2002
Reasons for Decision, February 2003

TransCanada PipeLines Limited
2003 Tolls and Tariff Application RH-1-2002
Reasons for Decision, July 2003

Electricity

Manitoba Hydro-Electric Board
Electricity Export Permit EPE-224
Letter Decision, 23 January 2003

Montenay Inc.
Electricity Export Permits EPE-228, EPE-229
Letter Decision, 7 July 2003

USGen New England Inc.
Electricity Export Permits EPE-230, EPE-231
Letter Decision, 1 August 2003

Duke Energy Marketing Canada Corp.
Electricity Export Permits EPE-238, EPE-239
Letter Decision, 18 September 2003

Avista Energy Inc.
Electricity Export Permits EPE-236, EPE-237
Letter Decision, 24 September 2003

Northern States Power Company
Electricity Export Permits EPE-234, EPE-235
Letter Decision, 25 September 2003

Public Service Company of Colorado
Electricity Export Permits EPE-232, EPE-233
Letter Decision, 26 September 2003

Direct Commodities Trading (DCT) Inc.
Electricity Export Permit EPE-240
Letter Decision, 15 October 2003

PPL EnergyPlus, LLC
Electricity Export Permits EPE-241, EPE-242
Letter Decision, 15 December 2003

Other Documents

Appropriate Dispute Resolution Guidelines (July 2003)

Canada's Energy Future: Scenarios for Supply and Demand to 2025 (June 2003)

Canadian Electricity Exports and Imports - An Energy Market Assessment (January 2003)

Focus on Safety - A Comparative Analysis of Pipeline Safety Performance (April 2003)

Maritimes Natural Gas Market - An Overview and Assessment (June 2003)

National Energy Board Annual Report Pursuant to the Access to Information Act and the Privacy Act 1 April 2002 - 31 March 2003 (11 June 2003)

National Energy Board 2003-2004 Estimates - Part III - Reports on Plans and Priorities (March 2003)

National Energy Board 2002 Annual Report to Parliament (March 2003)

National Energy Board Performance Report for the period ending March 31, 2003 (September 2003)

Regulatory Agenda, 12 Issues, 31 january 2002 to 31 December 2003

Short-term Natural Gas Deliverability from the Western Canada Sedimentary Basin 2003 - 2005 (December 2003)

Supplement IV

Legal Proceedings

1. *TransCanada PipeLines Limited (TCPL) – Application for Review of Board Toll Decision RH-4-2001 (RH-R-1-2002)*

Review by the NEB

On 16 September 2002, TCPL applied to the Board for a review and variance of Board Decision RH-4-2001 and the implementing Orders. TCPL claimed that the Board committed errors in the RH-4-2001 Decision when it:

- breached its legal obligation to apply the fair return standard;
- improperly applied the comparable investment, capital attraction and financial integrity standards;
- misinterpreted the ATWACC proposal;
- continued the application of the RH-2-94 Formula for determination of return on equity;
- violated the stand-alone principle; and
- breached the duty of fairness by failing to provide adequate reasons for many of its decisions.

Decision: Reasons for Decision issued on 20 February 2003 (RH-R-1-2002). The Board decided that the review application had not raised a doubt as to the correctness of the Board's 2002 Decision (RH-4-2001). In Reasons for Decision RH-R-1-2002, the Board dismissed the application.

2. *TransCanada PipeLines Limited (TCPL) – Application to Federal Court of Appeal of Board Decision RH-R-1-2002*

Federal Court of Appeal

On 21 March 2002, TCPL applied to the Federal Court of Appeal for leave to appeal the Board's RH-R-1-2002 Decision issued on 20 February 2003. In this Decision, the NEB dismissed TCPL's September 2002 request for a Review and Variance of the Board's June 2002 RH-4-2001 Decision on the company's Fair Return Application (see #1 above). In May 2003, the Federal Court of Appeal granted TCPL leave to appeal.

Decision: The hearing is scheduled in Toronto from 16 February to 19 February 2004.

3. *GSX Concerned Citizens Coalition's (GSXCCC) – Application for Review of Board Ruling and Board Decision GH-2-2002 – Westcoast Energy Inc.'s Southern Mainline Expansion*

Review by NEB

On 13 February 2003, GSXCCC applied for a review of a Board Decision dated 5 September 2002. The decision in question denied a GSXCCC request for additional environmental information and analysis regarding a proposed expansion of Westcoast Energy Inc.'s Southern Mainline natural gas pipeline system. GSXCCC also asked the Board to rescind its decision of January 2003 to approve the Southern Mainline Expansion.

In its application for review, GSXCCC asked the Board to (i) review its decision dated 5 September 2002 denying a motion by GSXCCC concerning unanswered information requests as it relates to the end use of the gas transported by the project, and (ii) rescind the Board's decision of January 2003 on the Southern Mainline expansion and to rehear the application to address the evidence and issues that were not previously addressed.

Decision: On 26 March 2003, the Board decided that a review was not warranted because GSXCCC had not raised a doubt as to the correctness of the decisions.

4. Federation of Saskatchewan Indian Nations; The Chiefs of Treaty No. 4 and Treaty No. 8 (FSIN) v. Alliance Pipeline Ltd.

Federal Court of Appeal

On 2 May 2001, FSIN brought an application for judicial review of the NEB's decision of 2 April 2001 to deny FSIN's request that the Board convene a hearing to consider revocation or suspension of the Certificate of Public Convenience and Necessity (Certificate GC-98) issued to Alliance. FSIN claimed that Alliance had contravened a term or condition of the certificate.

On 16 April 2002, the Federal Court of Appeal granted a motion by FSIN to amend its application for judicial review. The amendment added a request for judicial review/appeal of the NEB's decision of 23 November 1998 (approved by Governor in Council on 23 December 1998) to grant Certificate GC-98. The grounds for the added request included that the NEB failed to properly exercise its jurisdiction by issuing Certificate GC-98 without including revenue sharing as a term of GC-98 as mentioned in a Memorandum of Understanding between FSIN and Alliance.

Decision: On 28 May 2003, the Federal Court of Appeal quashed the application for lack of jurisdiction with costs to the respondent.

5. Communications, Energy and Paperworkers Union of Canada (CEP) – Application for Review of Trans-Northern Pipelines Inc. (TNPI) Capacity Expansion and Pipeline Flow Reversal Decision (OH-1-2003)

Review by NEB

In September 2003, CEP applied to the Board for a review of its Reasons for Decision OH-1-2003 issued on 7 August 2003, in which the Board approved an application from TNPI to increase the pipeline capacity on its petroleum products pipeline system from Montréal, Québec to Farran's Point near Ingleside, Ontario and to reverse the direction of flow between Farran's Point and the Clarkson Junction in Mississauga, Ontario. CEP requested the Board to review its decision in total and, in the interim, to stay the decision pending the outcome of the review.

Decision: On 7 November 2003, the Board denied the CEP's application for review and in light of that decision, decided it was unnecessary to address the request for a stay.

6. City of Hamilton - Judicial Review - Trans-Northern Pipeline Inc. (TNPI) – Pipeline Replacement and Lowering in Hamilton, Ontario - Decision OHW-1-2003

Federal Court, Trial Division

On 18 August 2003, the City of Hamilton filed a Notice of Application for Judicial Review with the Federal Court, Trial Division. The Notice sought, among other things, a declaration that

the *Canadian Environment Assessment Act* (CEA Act) does not apply to the TNPI application and that no environmental screening is or was required to be carried out by the Board under the CEA Act in respect of the application. The Board filed with the Court a Notice of Appearance.

Decision: As a result of a consent motion to the Court, the Application has been put into abeyance until 30 days after the Board's Decision on the TNPI application which was released on 27 November 2003. Due to the intervening Christmas recess at the Federal Court, the 30 day limitation will have expired on 15 January 2004.

Supplement V

Co-operation with Other Organizations

The NEB co-operates with other agencies to reduce regulatory overlap and provide more efficient regulatory services.

Alberta Energy and Utilities Board (EUB)

The NEB has a Memorandum of Understanding (MOU) with the EUB on Pipeline Incident Response. The agreement provides for mutual assistance and a faster and more effective response by both boards to pipeline incidents in Alberta.

The NEB and the EUB maintained their commitment to using the common reserves database for oil and gas reserves in Alberta. Both boards are committed to developing more efficient methods for maintaining estimates of reserves and to exploring other opportunities for co-operation. Currently the Boards are working on a new assessment of gas resources in Alberta.

British Columbia Ministry of Energy and Mines (BCMEM)

The NEB and BCMEM maintained their commitment to using a common reserves database for oil and gas reserves in British Columbia. Both boards are committed to developing more efficient methods for maintaining estimates of reserves and to exploring other opportunities for co-operation.

Canada-Newfoundland Offshore Petroleum Board (C-NOPB) and Canada-Nova Scotia Offshore Petroleum Board (C-NSOPB)

The Chairs of the NEB, the C-NOPB and the C-NSOPB, together with executives from the Newfoundland, Labrador and Nova Scotia Departments of Energy and NRCan, form the Oil and Gas Administrators Advisory Council (OGAAC). The OGAAC membership discusses and decides on horizontal issues affecting their respective organizations to ensure convergence and collaboration on oil and gas exploration and production issues across Canada. The NEB, C-NOPB and C-NSOPB staff also work together to review, update and amend regulations and guidelines affecting oil and gas activities on Accord Lands.

NEB staff also provides technical expertise to NRCan, C-NOPB and C-NSOPB on technical matters of mutual interest, such as reservoir assessment, occupational safety and health, diving, drilling and production activities.

Canadian Association of Members of Public Utility Tribunals (CAMPUT)

CAMPUT is a non-profit organization of federal, provincial and territorial boards and commissions which are responsible for the regulation of the electric, water, gas and pipeline utilities in Canada. Members sit on the executive committee of the association, promoting the education and training of members and staff of public utility tribunals. The NEB also provides staff support to CAMPUT in the form of information provision and assistance in conference organization. During 2003, the NEB co-hosted the annual CAMPUT conference with the EUB. The conference, held in Banff, Alberta, was themed *Markets in Transition - The Changing Face of Regulation.*

Canadian Environmental Assessment Agency (CEAA)

NEB staff is actively engaged with CEAA matters, participating in CEAA's Senior Management Committee and acting as an observer on the Regulatory Advisory Committee. This

involvement ensures effective co-ordination of regulatory responsibilities relating to environmental assessments.

Comisión Reguladora de Energía (CRE) of Mexico

Staff at the NEB and CRE maintain an ongoing informal relationship, sharing regulatory experiences and information on North American energy markets. Both organizations are committed to continuing and strengthening this relationship, which includes inter-agency staff visits. In September 2003, a trilateral agreement was signed with the NEB, CRE and FERC to share perspectives on regulatory approaches and to work on eliminating inconsistencies in regulation to the extent possible.

Co-operation on the Environmental Impact Assessment and Regulatory Review of a Northern Gas Pipeline Project through the Northwest Territories

In 2002, the NEB, in collaboration with the boards and agencies responsible for environmental impact assessment and regulatory review of a major natural gas pipeline through the Northwest Territories, issued a Co-operation Plan. This plan describes how the agencies propose to co-ordinate their activities to ensure an efficient, flexible and timely process that reduces duplication and enhances public and northern participation in the review of a major pipeline application. The NEB's partners in the Plan include the Mackenzie Valley Land and Water Board, the Sahtu and Gwich'in Land and Water Boards, the NWT Water Board, the Mackenzie Valley Environmental Impact Review Board, the Environmental Impact Screening Committee and the Environmental Impact Review Board for the Inuvialuit Settlement Region, the Inuvialuit Game Council, the Inuvialuit Land Administration, the Canadian Environmental Assessment Agency, the Department of Indian Affairs and Northern Development, and observers from the Deh Cho First Nation, the Government of the Northwest Territories, and the Government of Yukon.

Human Resources Development Canada (HRDC)

The NEB has an MOU with HRDC to administer the *Canada Labour Code* for NEB-regulated facilities and activities and to co-ordinate these safety responsibilities under the COGO Act and the NEB Act. The NEB also participated in the HRDC client satisfaction survey.

Mackenzie Valley Environmental Impact Review Board (MVEIRB)

In late 2000, the NEB and the MVEIRB signed a joint MOU to establish a co-operative framework for environmental impact assessment in the Mackenzie Valley. In the case of transboundary pipeline projects, the NEB has responsibilities under both the *Mackenzie Valley Resource Management Act* and the CEA Act. This MOU facilitates the co-operation of two boards to reduce duplication and increase effectiveness of the environmental review process.

National Association of Regulatory Utility Commissioners (NARUC)

Board Members regularly participate in meetings of the U.S. NARUC, particularly with respect to developments in U.S. gas markets that may affect cross-border trade in natural gas.

Natural Resources Canada (NRCan)

In 1996, the NEB signed an MOU with NRCan to reduce duplication and increase co-operation between the agencies. This MOU covers items such as data collection, the enhancement of energy models and special studies. The MOU was renewed in January 2000.

Northern Pipeline Agency (NPA)

The NEB provides technical and administrative assistance to the NPA, which, under the Northern Pipeline Act, has primary responsibility for overseeing the planning and

construction of the Canadian portion of the Alaska Natural Gas Transportation System by Foothills Pipe Lines Ltd.

Pipeline Technical Regulatory Authorities of Canada Council (PTRACC)

The NEB chairs a staff committee of federal and provincial technical regulators. PTRACC meets regularly throughout the year to discuss pipeline safety and environmental initiatives.

Transportation Safety Board of Canada (TSB)

While the NEB has exclusive responsibility for regulating the safety of oil and gas pipelines under federal jurisdiction, it shares the responsibility for investigating pipeline incidents with the TSB. The roles and responsibilities of each body with regard to pipeline accident investigations are outlined in a MOU between the two boards.

U.S. Federal Energy Regulatory Commission (FERC)

NEB and FERC executives maintain a regular dialogue on their respective regulatory experiences and exchange information available in the public domain in order to keep one another informed about current and upcoming issues which may affect both organizations, and to mutually benefit from knowledge about best regulatory practices. In September 2003, a trilateral agreement was signed with the NEB, CRE and FERC to share perspectives on regulatory approaches and to work on eliminating inconsistencies in regulation to the extent possible.

Yukon Territory Department of Economic Development (YDED)

The NEB continues to work with Yukon officials to facilitate the transfer of oil and gas regulatory responsibilities in accordance with the Yukon Accord Implementation Agreement. The Board provides expert technical advice to the YDED.

Supplement VI

List of Appendices

The following Statistical Reports are published separately as Appendices to the Annual Report. Electronic copies can be found on the Board's Web site and printed versions are available from the Publications Office. Call (403) 299-3562 or 1-800-899-1265, send a facsimile to (403) 292-5503 or visit the Board's Web site (www.neb-one.gc.ca).

Appendix A

A1 Crude Oil and Equivalent Supply and Disposition
A2 Estimated Established Reserves of Crude Oil and Bitumen at 31 December 2003
A3 Natural Gas Supply and Disposition
A4 Estimated Established Reserves of Marketable Natural Gas at 31 December 2003
A5 Natural Gas Liquids Supply and Disposition
A6 Geophysical Activity
A7 Exploration and Development Expenditures
A8 Sales of Exploration Rights in Western Canada
A9 Sales of Exploration Rights in Frontier Regions
A10 Electricity Generation and Disposition

Appendix B

B1 Certificates Issued During 2003 Approving Oil Pipeline Facilities Including Pipeline Construction Exceeding 40 Kilometres in Length
B2 Orders Issued During 2003 Approving Oil Pipeline Facilities Including Pipeline Construction Not Exceeding 40 Kilometres in Length
B3 Exports of Canadian Crude Oil and Equivalent - 2002 and 2003
B4 Exports of Canadian Crude Oil and Equivalent - 1999 to 2003
B5 Exports of Petroleum Products by Month - 2003
B6 Exports of Petroleum Products by Company - 2002 and 2003

Appendix C

C1 Certificates Issued During 2003 Approving the Construction of Gas Pipeline Facilities Exceeding 40 Kilometres in Length
C2 Orders Issued During 2003 Approving the Construction of Gas Pipeline Facilities Not Exceeding 40 Kilometres in Length
C3 Licences and Long-Term Orders to Export Natural Gas at 31 December 2003
C4 Licences and Long-Term Orders to Import Natural Gas at 31 December 2003
C5 Natural Gas Exports by Export Point - 1999 to 2003
C6 Total Net Exports of Propane and Butanes - 2002 and 2003

Appendix D

D1 Financial Information - Group 1 Oil Pipeline Companies with Multi-Year Incentive Toll Agreements
D2 Financial Information - Group 1 Oil Pipeline Companies with Tolls based on Cost of Service
D3 Financial Information - Group 1 Gas Pipeline Companies

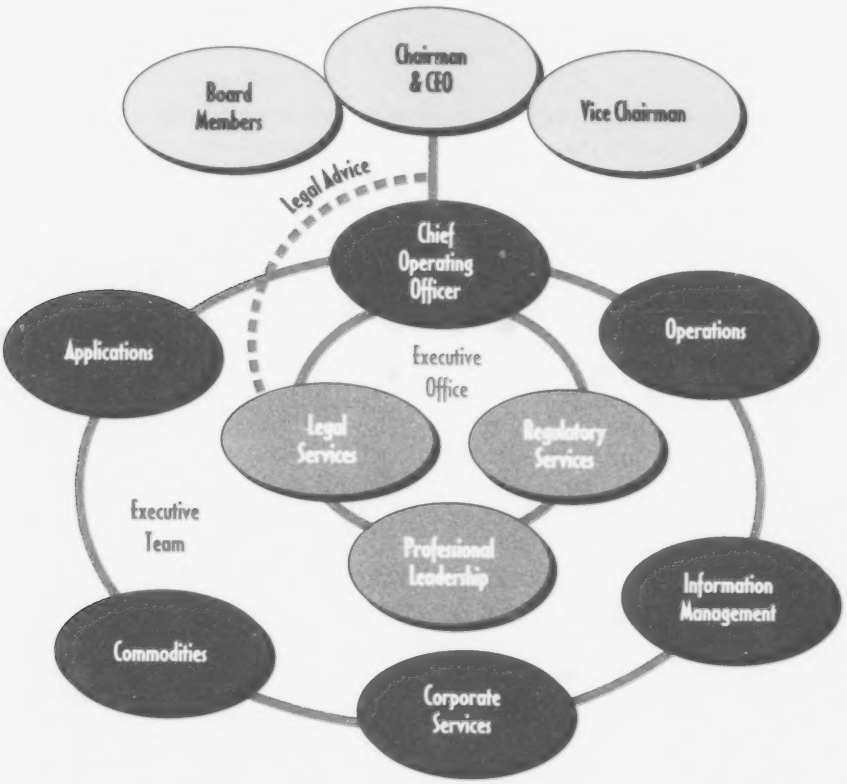
Appendix E

E1 Certificates and Permits Issued During 2003 for International Power Lines
E2 Amending Orders Issued During 2003 for International Power Lines
E3 Revoking Orders Issued During 2003 for International Power Lines
E4 Licences Issued During 2003 for the Export of Electricity
E5 Permits and Orders Issued During 2003 for the Export of Electricity
E6 Electricity Exports - 2003
E7 Electricity Trade Between Canada and the United States - 2003 (by Province)
E8 Electricity Trade between the United States and Canada - 2003 (by American Region/State)

Supplement VII

NEB Organization

The NEB is structured into five business units, reflecting major areas of responsibility: Applications, Operations, Commodities, Information Management and Corporate Services. In addition, the Executive Office includes three other teams providing specialized services: Legal Services[1], Professional Leadership and Regulatory Services.



Senior Board Staff

Jim Donihee	Chief Operating Officer
Judith Hanebury	General Counsel
Michel Mantha	Secretary of the Board
Sandy Harrison	Business Leader, Applications
John McCarthy	Business Leader, Commodities
Valerie Katarey	Business Leader, Corporate Services
Byron Goodall	Business Leader, Information Management

1 Legal Services is accountable to the Chairman and Board Members for the provision of legal advice. It is accountable to the Chief Operating Officer for administrative matters.

Gregory Lever	Business Leader, Operations
Bonnie Gray	Project Leader, Northern Preparedness
Glenn Booth	Professional Leader, Economics
Alan Murray	Professional Leader, Engineering
Robert Steedman	Professional Leader, Environment

Business Unit Responsibilities

Applications

The Applications Business Unit is responsible for processing and assessing most regulatory applications submitted under the NEB Act. These fall primarily under Parts III and IV of the NEB Act, corresponding to facilities and tolls and tariffs applications. It is also responsible for other matters such as the financial surveillance and financial audits of companies under the Board's jurisdiction and addressing landowner concerns.

Commodities

The Commodities Business Unit is responsible for energy industry and marketplace surveillance, including the outlook for the demand and supply of energy commodities in Canada, updating guidelines, and regulations relating to energy exports as prescribed by Part VI of the NEB Act. It is also responsible for assessing and processing applications for oil, natural gas and electricity exports, and for the construction and operation of international and designated interprovincial electric power lines.

Operations

The Operations Business Unit is accountable for safety, environmental matters and security pertaining to facilities under the NEB Act, the COGO Act and the CPR Act. It conducts safety, security and environmental inspections and audits, investigates incidents, monitors emergency response procedures, regulates the exploration, development and production of hydrocarbon resources in non-accord frontier lands, and develops regulations and guidelines with respect to the above.

Information Management

The Information Management Business Unit is responsible for developing and implementing an information management strategy for the Board and disseminating the information required by internal and external stakeholders. Its responsibilities include internal and external communications, library services, corporate records management, mail services, access to information, document production services, and Board-wide computer services.

Corporate Services

The Corporate Services Business Unit provides those services necessary to assist the Board in its management of human, materiel and financial resources. Its responsibilities include corporate policy and planning activities, materiel and facilities management, staffing, training, compensation and benefits, procurement, inventory control, physical security, and union/management activities.

Executive Office

The Executive Office is responsible for the Board's overall capability and readiness to meet strategic and operational requirements including legal advice for both regulatory and management purposes, maintaining and enhancing technical expertise within the Board in the economic, environmental and engineering fields, and hearing administration and regulatory support.

Supplement VIII

List of Abbreviations

ADR	appropriate dispute resolution
Alliance	Alliance Pipeline Ltd.
AVC	assurance of voluntary compliance
BC Gas	BC Gas Utility Ltd.
BC Hydro	British Columbia Hydro and Power Authority
Board or NEB	National Energy Board
BSE	Bovine spongiform encephalopathy (also known as "mad cow disease")
CAPP	Canadian Association of Petroleum Producers
CAMPUT	Canadian Association of Members of Public Utility Tribunals
CEAA	Canadian Environmental Assessment Agency
CEA Act	*Canadian Environmental Assessment Act*
CEPA	Canadian Energy Pipeline Association
CNRL	Canadian Natural Resources Limited
COGO Act	*Canadian Oil and Gas Operations Act*
CSA	Canadian Standards Association
CSR	Comprehensive Study Report
e-filing	Electronic Regulatory Filing
EFSEC	Energy Facility Site Evaluation Council
EMA	Energy Market Assessment
Enbridge	Enbridge Pipelines Inc.
ESIMS	Environmental and Safety Information Management System
ESRF	Environmental Studies Research Funds
FERC	Federal Energy Regulatory Commission
GDP	Gross Domestic Product
GFR	*Guidelines for Filing Requirements*
GSX	Georgia Strait Crossing Pipeline Limited
IPL	international power line
Line 9	Enbridge's crude oil pipeline from Montreal to Sarnia
M&NP	Maritimes and Northeast Pipeline Management Ltd.
Manitoba Hydro	Manitoba Hydro-Electric Board
MOU	Memorandum of Understanding
NB Power	New Brunswick Power Corporation
NEB or Board	National Energy Board
NEB Act	*National Energy Board Act*
NGLs	natural gas liquids
NYMEX	New York Mercantile Exchange
OPEC	Organization of Petroleum Exporting Countries
OPR-99	*Onshore Pipeline Regulations, 1999*
PPR	*Processing Plant Regulations*

RTO	regional transmission organization
SARS	Severe Acute Respiratory Syndrome
Sumas or SE2	Sumas Energy 2 Inc.
TMPL	Trans Mountain pipeline Company Ltd.
TransCanada	TransCanada PipeLines Limited
TSB	Transportation Safety Board of Canada
WCSB	Western Canada Sedimentary Basin
Westcoast	Westcoast Energy Inc.
WTI	West Texas Intermediate

Metric Conversion Table

The Board uses the International System of Units. The energy content of a 30-litre tank of gasoline is approximately one gigajoule. A petajoule is one million gigajoules. On average, Canada consumes about one petajoule of energy every 50 minutes for all uses (heat, light and transportation).

The following conversion table is provided for the convenience of readers who may be more familiar with the Imperial System.

Approximate Conversion Factors

metre	=	3.28 feet
kilometre	=	0.62 mile
hectare	=	2.47 acres
cubic metre of oil	=	6.3 barrels
cubic metre of natural gas	=	35.3 cubic feet
gigajoule	=	0.95 thousand cubic feet of natural gas at 1 000 Btu per cubic foot or 0.165 barrels of oil, or 0.28 megawatt hours of electricity
gigajoule	=	10^9 joules
petajoule	=	10^{15} joules
gigawatt hour	=	10^6 kilowatt hours
terawatt hour	=	10^9 kilowatt hours

Susan Abuid Jim Anderson Elizabeth Arden Lilly Armstrong Lawrence Ator Terry Baker Rita Bargetzi Trena Barnes Christine Beauchemin Helen Benes Judy Bennett Michael Benson Nancy Berard Brown Steve Berthelet Bill Bingham Karen Blank Marie Bleskan Glenn Booth Paul Bourgeois Barry Branston Diane Brenner Chantal Briand Michelle Brosseau Cliff Brown Steve Brown John Bulger Terri Burke Bette Burton Stephen Buszowski Mona Butler Glenn Cameron Kevin Campbell Shannon Carignan Gaétan Caron Philip Cheung Michael Chow Harley Christensen Ken Colosimo Patty Cooper Pat Cormier Dana Cornea Sylvie Cousineau Vanessa Cozine Colette Craig Susan Criddle Cassandra Crippen Sharon Culp Cecilia Cupido Jan Dane Jim Davidson Greg Davis Heather Davis Gord Daw Teresa de Grosbois Shawn DeForest Fred Deliencourt Danielle Demers Leona Desmet Denyse Dicey Anita Dion Bharat Dixit Anita Dodd Jim Donihee Abby Dorval Megan Douglas Pamela Dowson Nancy Dubois Karen Duckworth Donna Dunn Mavis Dunn Lynne Duquette Claudine Dutil-Berry Carmen Dybwad Mary Dylke Kelly Dypolt Ingrid Ektvedt Elizabeth Elder Julian Emanuel Deborah Emes Peter Enderwick Wendy Ettinger Marcus Eyre Sandra Falconi Alison Farrand Bobbi Feduniak Christopher Finley Rick Fisher Margery Fowke Jim Fox John Fox Murray Fraser Yvonne Fry Albert Fung Charlene Gaudet Feisal Gazie Scott Gedak Louise George Kevin Gerla Diana Ghikas Lillian Giardini Gurdeep Gill Preet Gill Melanie Gnyp Kevin Goble Byron Goodall Duncan Grant Bonnie Gray Geraldine Green Susan Marie Greentree Susan Gudgeon Pierre Guenard Sam Guirgis Emily Halliday Guy Hamel Judith Hanebury Rowland Harrison Sandy Harrison Sandra Harrower Michelle Haug Debbie Heckbert Paul Hess Ross Hicks Stella Hiebert Gord Higginson Kevin Hill Zarina Hirji Merle Hoffman Brent Hogue Sue Holdsworth Colleen Holt Kym Hopper-Smith Jensen Hu Orlando Huang Andrew Hudson Glorie Hughes Judy Inglis Sheena Jackson Leo Jansen Carie Jardine Franci Joglic Jodi-Lee Jenkins Audry Johnston Elizabeth Johnston Jeanette Johnston Brian Kane Adelle Karmas Valerie Katarey Maureen Kearns Teresa Kennedy Brenda Kenny Jamie Kereliuk Rudi Klaubert Chris Knoechel Mike Knopp Josef Kopec John Korec Johanne Kozak Tim Kucey Deborah Kuchinski Michele Labbé Louise-Solanges Lacasse Anne Lafrèche Nathalie Laprise Beth Lau Kerry Lee Robert LeMay Joe Lemee Nathan Lem Gregory Lever Kent Lien Robin Lipton Lynn Ludlow Adrian Lukowy Ken Luu Barry Lynch Louise Lynch Marnie MacGillivray Larry Mackenzie Leanne Maeda Henry Mah Bruce Maher Bob Mahnic Pat Mahon Tasneem Manji Michel Mantha Matt Mariano-Graza Wayne Marshall Ken Martin Sandra Martindale Cathy Martinello Ken Massé Lesley Matthews Marcella Matzeit John McCarthy Nadia McCarthy Jim McCormiskey John McIsaac Claire McKinnon Monika McPeake Margaret McQuiston Shari Medford Loreto Meneses Jan Merta Margaret Merta Geraldine Metcalfe Elke Meyer France Millette Ruth Mills Shelley Milutinovic Maureen Mitchell Tony Mitchell Bindu Modha Bob Modray Caroline Moore Bruce Moores Jane Morales Carmen Morin Louis Morin Joyce Morrison Karen Morton Carla Morton-Stowe Sylvia Mossaou Rob Mott Alan Murray Samira Nanji Brian Nesbitt François Nguyen Louise Niro James Obrigewitch Wendy Olan Karen Overli Daniella Pacifico Rosemarie Palmiere Lorne Patterson Ken Paulson Marc Pauzé Joe Paviglianiti Doug Pearce Marina Pedersen Bernard Pelletier Fern Phillips Steve Pierce Pat Pilon-Rouleau Howard Plato Amar Poonja Linda Postlewaite Francine Poudrette Carol-Lynn Power Ricki Pratte Jennifer Pugh Elizabeth Quarshie Christian Rankin Ed Reddy Karla Reesor Shirley Rehel Laura Richards Shane Richardson Chantal Robert Sherry Robinson Alex Ross Kent Rowden Craig Rubie Mary-Jane Sam Nurbanu Samji Monica Santander Luigi Santoianni Brenda Saretzky Denis Saumure Jody Saunders Mary Lou Scharf Peter Schnell Eugene Schoonen Dan Seekings Jason Selinger Don Semper Bill Seney Candice Servais Michelle Shabits Ann Shalla Lori-Ann Sharp Jutta Shaw Henri Simonneau Chantale Simons Rudy Singer Gail Singh Corina Smith Patrick Sprague Jennifer Stanier Robert Steedman Brenda Stevens Jonathan Stewart Brent Storey Susan Storey Catherine Taylor Terry Taylor Jean-Paul Théorêt Zoe Ter Berg Marc Thibaudeau Jane Thomas Deborah Thompson Gerald Thompson Jean Paul Tourigny Denis Tremblay Paul Trudel Rick Turner Chris van Egmond Laura Van Ham Mieke Vander Valk Jacqueline Vanhouche Ken Vollman Dave Walker Janet Walker Patricia Walker Bill Wall Shelley Watt Bryan Williams Jean Woeller Sharon Wong Gary Woo David Young Tracy Young Marian Yuzda Hanya Zacharko